

MDX-C8970R

SERVICE MANUAL

AEP Model
UK Model



Model Name Using Similar Mechanism	MDX-C7970R
Base Mechanism Type	MG-164NF-138
Optical Pick-Up Name	KMS-241B/J1NP

SPECIFICATIONS

MD player section

Signal-to-noise ratio	93 dB
Frequency response	10 – 20,000 Hz
Wow and flutter	Below measurable limit

Tuner section

FM

Tuning range	87.5 – 108.0 MHz
Aerial terminal	External aerial connector
Intermediate frequency	10.7 MHz
Usable sensitivity	8 dBf
Selectivity	75 dB at 400 kHz 50 dB at 200 kHz
Signal-to-noise ratio	65 dB (stereo), 68 dB (mono)
Harmonic distortion at 1 kHz	0.7 % (stereo), 0.4 % (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz

MW/LW

Tuning range	MW: 531 – 1,602 kHz LW: 153 – 281 kHz
Aerial terminal	External aerial connector
Intermediate frequency	10.71 MHz/450 kHz
Sensitivity	MW: 30 µV LW: 50 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	45 W × 4 (at 4 ohms)

General

Outputs	Line outputs (3) Power aerial relay control lead Power amplifier control lead Telephone ATT control lead Illumination control lead ± 12 dB; $f_0 = 62$ Hz, 157 Hz, 396 Hz, 1.0 kHz, 2.51 kHz, 6.34 kHz, 16 kHz
Equalizer	12 V DC car battery
Power requirements	(negative earth)
Dimensions	Approx. 178 × 50 × 182 mm (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 163 mm (w/h/d)
Mass	Approx. 1.3 kg
Supplied accessories	Rotary commander RM-X4V (1) Microphone (1) Parts for installation and connections (1 set) Front panel case (1)

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Design and specifications are subject to change without notice.

FM/MW/LW MINIDISC PLAYER



SONY®

TABLE OF CONTENTS

1. SERVICE NOTE	3
2. GENERAL	
Location of controls	4
Resetting the unit	4
Detaching the front panel	4
Preparing the rotary commander	4
Setting the clock	4
Installation	5
Connections	6
Installation for microphone and rotary commander	9
3. DISASSEMBLY	11
4. ELECTRICAL ADJUSTMENTS	
Test Mode	17
MD Section	17
Tuner Section	17
5. DIAGRAMS	
5-1. Block Diagram – SERVO Section –	21
5-2. Block Diagram – TUNER Section –	22
5-3. Block Diagram – MAIN Section –	23
5-4. Block Diagram – DISPLAY/KEY CONTROL Section –	24
5-5. Block Diagram – BUS CONTROL/POWER SUPPLY Section –	25
5-6. Note for Printed Wiring Boards and Schematic Diagrams	26
5-7. Printed Wiring Board – SERVO/SENSOR Boards –	27
5-8. Schematic Diagram – SERVO (1/2)/SENSOR Boards –	28
5-9. Schematic Diagram – SERVO Board (2/2) –	29
5-10. Printed Wiring Board – MAIN Board (Component Side) –	30
5-11. Printed Wiring Board – MAIN Board (Conductor Side) –	31
5-12. Schematic Diagram – MAIN Board (1/5) –	32
5-13. Schematic Diagram – MAIN Board (2/5) –	33
5-14. Schematic Diagram – MAIN Board (3/5) –	34
5-15. Schematic Diagram – MAIN Board (4/5) –	35
5-16. Schematic Diagram – MAIN Board (5/5) –	36
5-17. Printed Wiring Board – POWER Board –	38
5-18. Schematic Diagram – POWER Board –	39
5-19. Printed Wiring Board – DISPLAY Board –	40
5-20. Schematic Diagram – DISPLAY Board –	41
5-21. Printed Wiring Board – RELAY Board –	42
5-22. Schematic Diagram – RELAY Board –	43
5-23. IC Pin Function Description	52
6. EXPLODED VIEWS	66
7. ELECTRICAL PARTS LIST	70

SECTION 1 SERVICE NOTE

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.

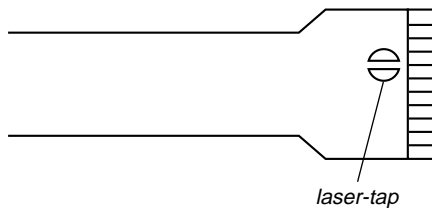
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

Never look into the laser diode emission from right above when checking it for adjustment. It is feared that you will lose your sight.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK (KMS-241B/J1NP)

The laser diode in the optical pick-up block may suffer electrostatic break-down easily. When handling it, perform soldering bridge to the laser-tap on the flexible board. Also perform measures against electrostatic break-down sufficiently before the operation. The flexible board is easily damaged and should be handled with care.



OPTICAL PICK-UP FLEXIBLE BOARD

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

• Model Identification

The destination is expressed with the model according to the language of Program Rom mounted in the set.

How to identify the model is described below.

– POWER BOARD (Component Side) –



MSM534001E-49TSKFDR3 (TYPE C: ENGLISH, FRENCH)
MSM534001E-50TSKFDR3 (TYPE A: ENGLISH, SPANISH)
MSM534001E-51TSKFDR3 (TYPE B: ENGLISH, GERMAN)

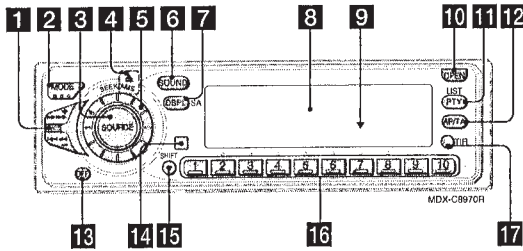
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE WITH MARK \triangle ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 2 GENERAL

This section is extracted from instruction manual.

Location of controls



Refer to the pages for details.

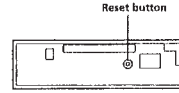
- 1 SEEK/AMS (seek/Automatic Music Sensor/manual search/voice drive/voice memo select) control 10, 12, 13, 15, 20, 21, 22, 23, 25, 35, 36, 38, 41
- 2 MODE (band/unit select) button 14, 15, 34, 36, 40
- 3 SOURCE (TUNER/MD/CD) button 9, 14, 15, 18, 26, 27, 28, 29, 30, 34, 36, 40
- 4 Δ (eject) button (located on the front side of the unit behind by the front panel) 9
- 5 Dial (volume/DSO level/equalizer level/listening position/front or rear speaker volume/subwoofer volume/balance) 8, 19, 20, 25, 26, 27, 28, 29, 30, 31, 39, 40
Dial usually functions as a volume control except in some adjusting modes.
- 6 SOUND button 26, 27, 28, 29, 30, 31
- 7 DSP/SA (display mode/spectrum analyzer change) button 10, 16, 17, 34, 35, 39, 40
- 8 Display window
- 9 Reset button (located on the front side of the unit behind by the front panel) 7
- 10 OPEN button 7, 9, 43
- 11 PTY/LIST button
Disc Memo 39, 40
List-up 40
RDS Programme 22
- 12 AF/TA button 17, 18, 19
- 13 OFF button* 7, 9
- 14 Sensor for the optional wireless remote
- 15 SHIFT button
PLAY MODE 12, 13, 14, 15, 18, 19, 36, 37, 38, 41
REP 11, 36
SET UP 8, 10, 22, 33, 35
SHUF 11, 36
- 16 During radio reception:
Number buttons 15, 18, 19
During CD/MD playback:
Direct disc selection buttons 35, 36
- 17 TIR button 20, 21

*** Warning when installing in a car without ACC (accessory) position on the ignition key switch**
Be sure to press **OFF** on the unit for two seconds to turn off the clock display after turned off the engine.
When you press **OFF** momentarily, the clock display does not turn off and this causes battery wear.

Getting Started

Resetting the unit

Before operating the unit for the first time or after replacing the car battery, you must reset the unit.
Press the reset button with a pointed object, such as a ballpoint pen.



Notes

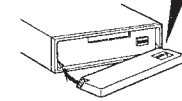
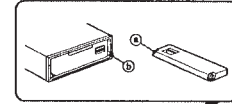
- Pressing the reset button will erase the clock and some memorised functions.
- When you connect the power supply cord to the unit or reset the unit, wait for about 10 seconds before you insert a disc. If you insert a disc within these 10 seconds, the unit will not be reset, and you will have to press the reset button again.

Notes

- Do not place anything on the inner surface of the front panel.
- Be sure not to drop the panel when detaching it from the unit.
- If you detach the panel while the unit is still on, the power will be turned off automatically to prevent the speakers from being damaged.
- When you carry the front panel with you, put it in the supplied front panel case.

Attaching the front panel

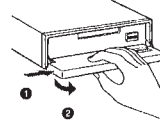
Place the hole ④ in the front panel onto the spindle ③ on the unit as illustrated, then push the left side in.



Detaching the front panel

You can detach the front panel of this unit to protect the unit from being stolen.

- Press **OFF**.
- Press **OPEN** to open up the front panel, then slide the front panel to the right side, and pull out from the left side of the front panel.



Notes

- Be sure not to attach the front panel upside down.
- Do not press the front panel hard against the unit when attaching it. Press it lightly against the unit.
- Do not press hard or put excessive pressure on the display windows of the front panel.
- Do not expose the front panel to direct sunlight or heat sources such as hot air ducts, and do not leave it in a humid place. Never leave it on the dashboard of a car parked in direct sunlight where there may be a considerable rise in temperature.

Caution alarm

If you turn the ignition key switch to the OFF position without removing the front panel, the caution alarm will beep for a few seconds.

TIR indicator

If you pull out the ignition key while the TIR function is on, the TIR indicator flashes a few times.

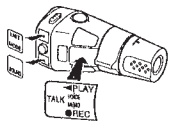


TIR indicator

For more information on the TIR function, refer to "Recording the traffic announcements" (page 20).

Preparing the rotary commander

When you mount the rotary commander, attach the labels as shown in the illustration below.

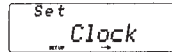


Setting the clock

The clock uses a 24-hour digital indication.

Example: To set the clock to 10:08

- Press **SHIFT**, then press ③ (SET UP).

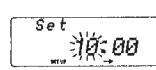


- Press ⑤ (←→).

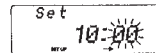


The hour digit flashes.

- Set the hour.

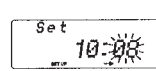


- Press ⑤ (←→).

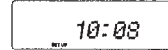


The minute digits flash.

- Set the minute.



- Press **SHIFT**.



The clock starts.

- Press **SHIFT**.
After the mode setting is complete, the display returns to normal playback mode.

Installation

Precautions

- Do not tamper with the four holes on the upper surface of the unit. They are used for tuner adjustments to be made only by service technicians.
- Choose the installation location carefully so the unit will not interfere with the driver while driving.
- Avoid installing the unit where it would be subject to high temperatures, such as from direct sunlight or hot air from the heater, or where it would be subject to dust, dirt or excessive vibration.
- Use only the supplied mounting hardware for a safe and secure installation.

Mounting angle adjustment

Adjust the mounting angle to less than 20°.

How to detach and attach the front panel

Before installing the unit, detach the front panel.

To detach **A**

Before detaching the front panel, be sure to press **(OFF)** first. Then press **(OPEN)** to open the front panel, then slide the front panel to the right side, and pull out the left side of the front panel.

To attach **B**

Place the hole **Ⓐ** in the front panel onto the spindle **Ⓑ** on the unit as illustrated, then push the left side in.

Instalación

Precauciones

- No toque los cuatro orificios de la superficie superior de la unidad. Estos orificios son para ajustes del sintonizador que solamente deberán realizar técnicos de reparación.
- Elija cuidadosamente el lugar de instalación de forma que la unidad no interfiera en las funciones normales de conducción.
- Evite instalar la unidad donde pueda quedar sometida a altas temperaturas, como a la luz solar directa o al aire de calefacción, o a polvo, suciedad, o vibraciones excesivas.
- Para realizar una instalación segura y firme, utilice solamente la ferretería de montaje suministrada.

Ajuste del ángulo de montaje

Ajuste el ángulo de montaje a menos de 20°.

Forma de extraer e instalar el panel frontal

Antes de instalar la unidad, extraiga el panel frontal.

Para extraerlo **A**

Antes de extraer el panel frontal, ceriéndose de presionar **(OFF)**. Después presione **(OPEN)** a fin de abrirlo, después deslícelo hacia la derecha y por último, tire de su parte izquierda.

Para instalarlo **B**

Coloque el orificio **Ⓐ** del panel frontal en el eje **Ⓑ** de la unidad, como se muestra en la ilustración, y después presione la parte izquierda.

Instalação

Precações

- Não altere indevidamente os quatro orifícios da superfície da parte superior do aparelho. Estes servem para regulações do sintonizador que devem ser efectuadas somente por técnicos qualificados.
- Escolha com cuidado o local de instalação para que o aparelho não prejudique a condução.
- Evite instalar o aparelho onde possa estar sujeito a altas temperaturas, tais como em locais expostos directamente à luz do sol, ao ar quente dos aquecimentos, ou sujeitos a pó, sujidade ou vibração excessiva.
- Para efectuar uma instalação segura utilize unicamente o hardware de montagem fornecido.

Ajuste do ângulo de montagem

Ajuste o ângulo de montagem a menos de 20°.

Para retirar e colocar o painel frontal

Retire o painel frontal antes de iniciar a instalação do aparelho.

Para retirar **A**

Antes de retirar o painel frontal, tem de carregar primeiro em **(OFF)**. A seguir, carregue em **(OPEN)** para soltar o painel frontal e empurre-o para a direita. Depois puxe o lado esquerdo do painel para fora.

Para colocar **B**

Coloque o orifício **Ⓐ** do painel frontal no eixo **Ⓑ** do aparelho tal como ilustrado, e depois carregue no lado esquerdo para dentro.

Montering

Säkerhetsföreskrifter

- Låt de fyra hålen på bilstereons ovansida vara. De är till för radiojusteringar som endast får utföras av fackkunliga tekniker.
- Välj installationsställe omsorgsfull så att den inte stör förarens koncentration under körningen.
- Montera inte bilstereon där den utsätts för värme, t ex solsken eller varmluft, eller där den utsätts för damm, smuts och/eller vibrationer.
- Använd endast de medföljande monteringsstillbehören för att vara säker på att bilstereon monteras på ett säkert och korrekt sätt.

Tillåten monteringsvinkel

Monteringsvinkeln får inte vara större än 20 grader.

Ta loss/fästa frontpanelen

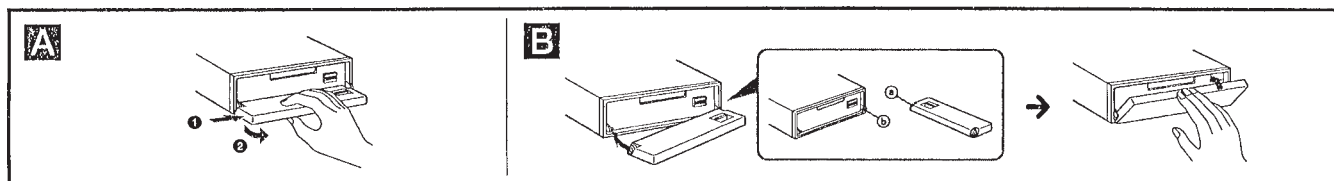
Ta loss frontpanelen innan du monterar bilstereon.

Ta loss frontpanelen **A**

Var noga med att trycka på **(OFF)** innan frontpanelen tas loss. Tryck därefter på **(OPEN)** för att öppna frontpanelen. Skjut frontpanelen åt höger och dra dess vänstra del utåt för att ta loss frontpanelen.

Fästa frontpanelen **B**

Placera frontpanelen så att hålet **Ⓐ** på frontpanelen träas över axeln **Ⓑ** på bilstereon enligt illustrationen. Tryck därefter frontpanelens vänstra del inåt.

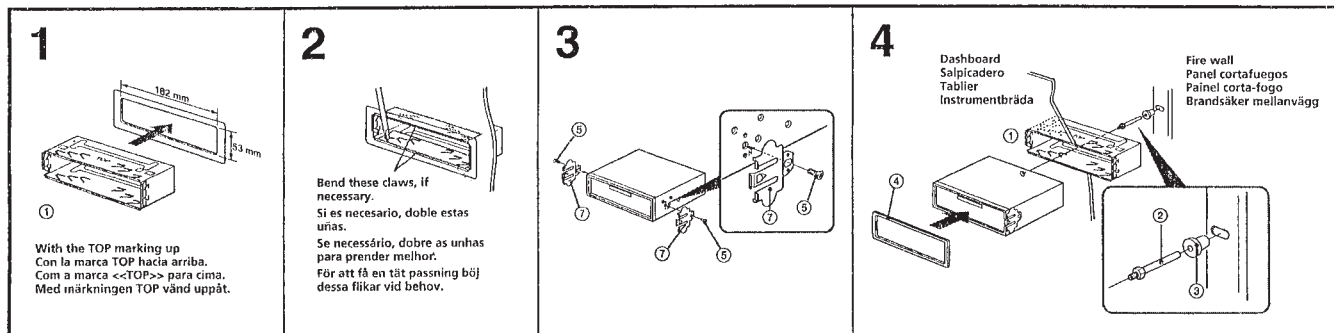


Installation in the dashboard

Instalación en el salpicadero

Instalação no tablier

Montera på instrumentbrädan



Connections

Cautions

- This unit is designed for negative earth 12 V DC operation only.
- Connect the power connecting cord ④ to the unit and speakers before connecting it to the auxiliary power connector.
- Run all earth wires to a common earth point.
- Connect the yellow cord to a free car circuit rated higher than the unit's fuse rating. If you connect this unit in series with other stereo components, the car circuit they are connected to must be rated higher than the sum of the individual component's fuse rating. If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery. If no car circuits are available for connecting this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the unit blows its fuse, no other circuits will be cut off.

Warning when installing in a car without ACC (accessory) position on the ignition key switch

Be sure to press **OFF** on the unit for two seconds to turn off the clock display after turned off the engine.
When you press **OFF** momentarily, the clock display does not turn off and this causes battery wear.

Notes of connection example

- Notes on the control leads
- The power aerial control lead (blue) supplies +12 V DC when you turn on the tuner or when you activate the AF (Alternative Frequency), the TA (Traffic Announcement) or TIR (Traffic Information Replay) function.
 - A power aerial without a relay box cannot be used with this unit.

Memory hold connection
When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition switch is turned off.

- Notes on speaker connection**
- Before connecting the speakers, turn the unit off.
 - Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities.
 - Otherwise, the speakers may be damaged.
 - Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.
 - Do not attempt to connect the speakers in parallel.
 - Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit.
 - Doing so may damage the active speakers.
 - Therefore, be sure to connect passive speakers to these terminals.

Warning
If you have a power aerial without a relay box, connecting this unit with the supplied power connecting cord ④ may damage the aerial.

Reset button

When the installation and connections are over, be sure to press the reset button with a ballpoint pen, etc.

Botão de reinicialização

Quando terminar a instalação e as ligações, não se esqueça de carregar no botão de reinicialização com a ponta de uma caneta, etc.



Conexiones

Precauciones

- Esta unidad ha sido diseñada para alimentarse con 12 V CC, negativo a masa, solamente.
- Conecte el cable de conexión de alimentación ④ a la unidad y los altavoces antes de conectarlo al conector de alimentación auxiliar.
- Conecte todos los conductores de puesta a masa a un punto común.
- Conecte el cable amarillo a un circuito libre del automóvil que tenga una capacidad superior a la del fusible de la unidad. Si conecta esta unidad en serie con otros componentes estereofónicos, el circuito del automóvil al que se encuentran conectados debe tener una capacidad superior a la de la suma de las capacidades de los fusibles de cada componente. Si ningún circuito del automóvil tiene una capacidad tan alta como la del fusible de la unidad, conecte ésta directamente a la batería. Si el automóvil no dispone de ningún circuito para conectar esta unidad, conéctela a un circuito del automóvil con capacidad superior a la del fusible de la unidad, de forma que si se funde el fusible de ésta, no se interrumpa ningún otro circuito.

Advertencia sobre la instalación en un automóvil que no disponga de posición ACC (accesorios) en el interruptor de la llave de encendido

Asegúrese de presionar **OFF** en la unidad durante dos segundos para desactivar la indicación del reloj una vez apagado el motor. Si presiona **OFF** momentáneamente, la indicación del reloj no se desactivará y esto causará el desgaste de la batería.

Notas de ejemplo de conexiones

- Notas sobre conductores de control
- El conductor de control (azul) de la antena motorizada suministra + 12 V CC al activar el sintonizador o la función AF (frecuencias alternativas), TA (anuncios de tráfico) o TIR (repetición de información sobre el tráfico).
 - Con esta unidad no podrá utilizarse una antena motorizada sin caja de relés.
- Conexión para protección de la memoria**
Si conecta el conductor de entrada amarillo, el circuito de la memoria recibirá siempre alimentación, incluso aunque ponga la llave de encendido en la posición de apagado.

- Notas sobre la conexión de los altavoces**
- Antes de conectar los altavoces, desconecte la alimentación de la unidad.
 - Utilice altavoces con una impedancia de 4 a 8 ohmios y con la potencia máxima admisible adecuada, ya que de lo contrario podría dañarlos.
 - No conecte los terminales del sistema de altavoces al chasis del automóvil, ni los del altavoz izquierdo a los del derecho.
 - No intente conectar los altavoces en paralelo.
 - No conecte altavoces activos (con amplificadores incorporados) a los terminales de altavoces de la unidad. Si lo hiciera, podría dañar tales altavoces.
 - Por lo tanto, cerciórese de conectar altavoces pasivos a estos terminales.

Advertencia
Si dispone de una antena motorizada sin caja de relé, la conexión de esta unidad con el cable de conexión de alimentación ④ suministrado puede dañar la antena.

Botón de reposición

Quando finalice a instalação y las conexiones, cerciórese de presionar el botón de reposición con un bolígrafo, etc.

Återställningsknappen

Kom ihåg att använda en penna eller något annat spetsigt föremål för att trycka på återställningsknappen när anslutningen och monteringen är klar.

Ligações

Advertência

- Este aparelho foi concebido para funcionar somente com corrente contínua de 12 V com negativo à massa.
- Ligue o cabo de alimentação de corrente ④ ao aparelho e aos alifalantes antes de o ligar ao conector de corrente auxiliar.
- Ligue todos os fios de terra num ponto de massa comum.
- Ligue o cabo amarelo a um circuito livre do automóvel com uma capacidade nominal superior à do fusível do aparelho. Se ligar este aparelho em série com outros componentes estéreo, o circuito do automóvel a que estão ligados deve ter uma capacidade nominal superior à soma da capacidade dos fusíveis de cada componente. Se nenhum circuito do automóvel tiver uma capacidade tão alta como a do fusível do aparelho, ligue o aparelho directamente à bateria. Se o automóvel não tiver nenhum circuito disponível para ligação do aparelho, ligue-o a um circuito com uma capacidade superior à do fusível do aparelho para que se o fusível do aparelho se fundir, nenhum dos outros circuitos seja cortado.

Aviso sobre a instalação num automóvel sem posição ACC (acessórios) na chave de ignição

Verifique se carregou em **OFF** no aparelho durante dois segundos para desactivar o visor do relógio depois de ter desligado o motor. Se carregar ligeiramente em **OFF**, não desactiva o visor do relógio o que provoca o desgaste da bateria.

Notas sobre o exemplo de ligação

- Notas sobre os fios de controlo
- O fio de controlo da antena eléctrica (azul) fornece +12 V CC quando ligar o sintonizador ou quando activar as funções AF (frequência alternativa), TA (informações de trânsito) ou TIR (Repetição de informações de trânsito).
 - Uma antena motorizada sem um relé não pode ser utilizada com este aparelho.

Ligação para alimentação contínua da memória
Quando, o fio amarelo de entrada de alimentação for ligado, os circuitos de memória ficarão com alimentação contínua, mesmo se a chave de ignição estiver desligada.

- Notas sobre a ligação dos altifalantes**
- Antes de ligar os altifalantes, desligue o aparelho.
 - Utilize altifalantes com impedância de 4 a 8 ohm, e com capacidade admissível de potência adequada.
 - Caso contrário, os altifalantes poderão sofrer avarias.
 - Não ligue os terminais do sistema de altifalantes ao chassi do automóvel, e não ligue os terminais do altifalante direito aos terminais do altifalante esquerdo.
 - Não tente ligar os altifalantes em paralelo.
 - Não ligue nenhum sistema de altifalantes activos (com amplificadores incorporados) aos terminais dos altifalantes do aparelho. Caso o faça, poderá avariar o sistema de altifalantes activos. Portanto, não se esqueça de ligar altifalantes passivos a estes terminais.

Atenção
Se a antena eléctrica não tiver uma caixa de relé, o facto de ligar esta aparelho com o cabo de alimentação ④ fornecido, pode provocar danos na antena.

Anslutning

Säkerhetsföreskrifter

- Denna bilstereo är endast avsedd för anslutning till ett negativt jordat, 12 V bilbatteri.
- Anslut strömkabeln ④ till enheten och högtalarna innan du ansluter den till den yttre strömanslutningen.
- Dra samtliga jordledningar till en och samma jordningspunkt.
- Anslut den gula kabeln till en ledig bilkrets som har en säkring med ett högre ampere än enheten. Om du seriekopplar denna enhet med andra stereokomponenter, måste den bilkrets de är kopplade till ha en säkring med en högre ampere än summan av de enskilda komponenternas ampere. Om det inte finns någon bilkrets som har en säkring med ett lika högt amperetal som enheten kräver, ska du ansluta enheten direkt till batteriet. Om det inte finns några bilkretsar att ansluta denna enhet till ska du ansluta enheten till en krets som har en säkring med ett högre ampere än enheten för att förhindra att inga andra kretsar klipps av om säkringen går.

Var försiktig när du gör installationen i en bil där tändningslåset saknar tillbehörsäge (ACC)

Glöm inte att trycka på **OFF** på enheten under två sekunder för att stänga av klockans teckenfönster efter det att du har stängt av motorn.
Om du bara trycker på **OFF** ett kort ögonblick slocknar inte klockans teckenfönster vilket kan leda till att batteriet laddas ur.

Att observera angående anslutningsexempen

- Att observera angående de olika styrkablaarna
- Motorantennens styrkabel (blå) leder + 12 volts likström när du slår på radion eller när du aktiverar mottagning av alternativ frekvenser AF, mottagning av trafikmeddelanden TA eller upppeplavag av trafikinformation TIR.
 - En motorantenn utan styrrelådos kan inte anslutas till denna bilstereo.

Anslutning för minnesstöd
När du anslutit den gula, ingående strömkabeln försörjs minneskretsen med ström hela tiden, även när tändlåset slås ifrån.

- Att observera angående högtalarnas anslutning
- Slå av bilstereo innan du ansluter högtalarna.
 - Anslut endast högtalare, vars impedans varierar från 4 till 8 ohm och som har tillräcklig effekthanteringskapacitet för att skydda högtalarna mot skador.
 - Anslut inte något av högtalaruttagen till bilens chassi. Anslut inte heller uttagen på höger högtalare till uttagen på vänster högtalare.
 - Anslut inte högtalarna parallellt.
 - Anslut inte aktiva högtalare (med inbyggda slutsteg) till bilstereons högtalaruttag, eftersom de kan skada de aktiva högtalarna. Var noga med att bara ansluta passiva högtalare till dessa uttag.

Varning
Om du har en motorantenn utan relådos kan antennen skadas om du ansluter enheten med den medföljande strömkabeln ④.

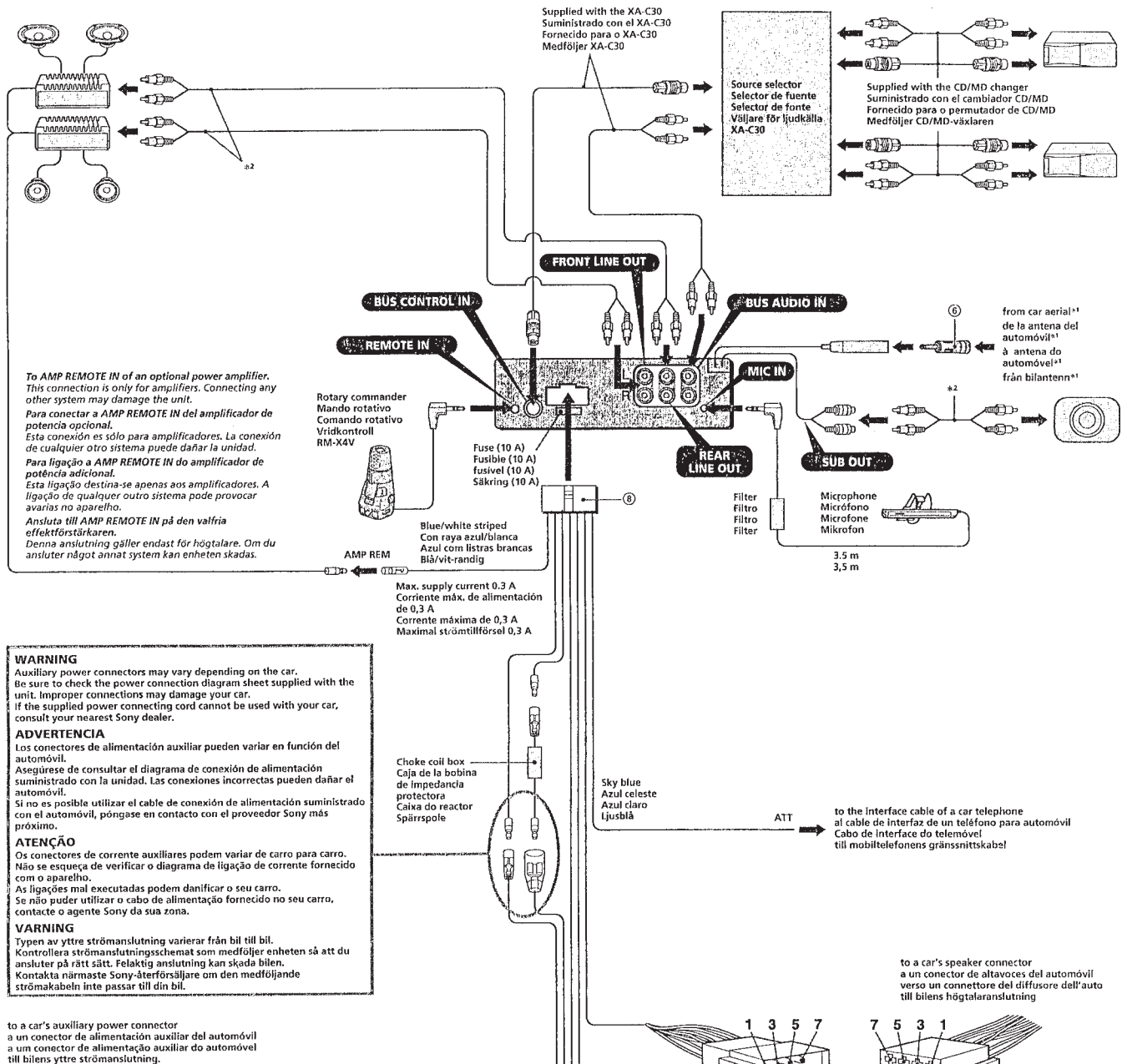
Connection example Ejemplo de conexiones Exemplo de ligações Anslutningarna enligt exemplet

*1 Note for the aerial connecting
If your car aerial is an ISO (International Organization for Standardization) type, use the supplied adapter ⑥ to connect it. First connect the car aerial to the supplied adapter, then connect it to the aerial jack of the master unit.
*2 RCA pin cord (not supplied)

*1 Nota sobre la conexión de la antena
Si la antena del automóvil es del tipo ISO (International Organization for Standardization), emplee el adaptador suministrado ⑥ para conectarla. En primer lugar, conecte la antena del automóvil al adaptador suministrado y, a continuación, a la toma de antena de la unidad principal.
*2 Cable con clavijas RCA (no suministrado)

*1 Nota referente à ligação da antena
Se a antena do automóvel for uma antena de tipo ISO (International Organization for Standardization), utilize o adaptador fornecido ⑥ para fazer a ligação respectiva. Ligue primeiro a antena do automóvel ao adaptador fornecido e depois à ficha tipo jack de antena do sistema principal.
*2 Cabo de terminais RCA (não fornecido)

*1 Angående antennanslutning
Om motorantennen är av ISO-typ (International Organization for Standardization), använd den medföljande adapter ⑥ för att ansluta den. Anslut först motorantennen till medföljande adapter och därefter till antennuttaket på huvudenheten.
*2 Kabel med RCA-kontakter (medföljer inte)



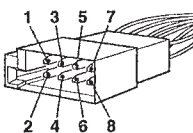
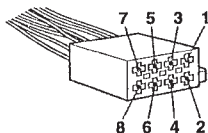
WARNING
Auxiliary power connectors may vary depending on the car. Be sure to check the power connection diagram sheet supplied with the unit. Improper connections may damage your car. If the supplied power connecting cord cannot be used with your car, consult your nearest Sony dealer.

ADVERTENCIA
Los conectores de alimentación auxiliar pueden variar en función del automóvil. Asegúrese de consultar el diagrama de conexión de alimentación suministrado con la unidad. Las conexiones incorrectas pueden dañar el automóvil. Si no es posible utilizar el cable de conexión de alimentación suministrado con el automóvil, póngase en contacto con el proveedor Sony más próximo.

ATENÇÃO
Os conectores de corrente auxiliares podem variar de carro para carro. Não se esqueça de verificar o diagrama de ligação de corrente fornecido com o aparelho. As ligações mal executadas podem danificar o seu carro. Se não puder utilizar o cabo de alimentação fornecido no seu carro, contacte o agente Sony da sua zona.

VARNING
Typen av yttre strömanslutning varierar från bil till bil. Kontrollera strömanslutningsschemat som medföljer enheten så att du ansluter på rätt sätt. Felaktig anslutning kan skada bilen. Kontakta närmaste Sony-återförsäljare om den medföljande strömkabeln inte passar till din bil.

to a car's auxiliary power connector
a un conector de alimentación auxiliar del automóvil
a um conector de alimentação auxiliar do automóvel
till bilens yttre strömanslutning.



4	Yellow Amarillo Gul	continuous power supply suministro de alimentación continuo alimentação de corrente contínua kontinuerlig strömförsörjning	7	Red Rojo Vermelho Röd	switched power supply suministro conmutado de alimentación alimentação de corrente comutada switchad strömförsörjning
5	Blue Azul Blå	power aerial control control de antena motorizada antena eléctrica styrström för motorantenn	8	Black Negro Preto Svart	earth toma de tierra Terra jord
6	Orange/ White Naranja/ blanco Cor de laranja/ branco Orange/vit	switched illumination power supply fuente de alimentación de iluminación conmutada fonte de alimentação comutada para iluminação switchad strömförsörjning till belysning	Positions 1, 2 and 3 do not have pins. Las posiciones 1, 2 y 3 no disponen de pines. As posições 1, 2 e 3 não têm pinos. Positionerna 1, 2 och 3 saknar stift.		

1	Purple Púrpura Violett	Speaker, Rear, Right Altavoz, parte posterior, derecho Altifalante, Parte de trás, Direito Högtalare, bakre, höger	5	White Blanco Branco Vit	Speaker, Front, Left Altavoz, parte frontal, izquierdo Altifalante, Parte da frente, Esquerdo Högtalare, främre, vänster
2		Speaker, Rear, Right Altavoz, parte posterior, derecho Altifalante, Parte de trás, Direito Högtalare, bakre, höger	6		Speaker, Front, Left Altavoz, parte frontal, izquierdo Altifalante, Parte da frente, Esquerdo Högtalare, främre, vänster
3	Grey Gris Grå	Speaker, Front, Right Altavoz, parte frontal, derecho Altifalante, Parte da frente, Direito Högtalare, främre, höger	7	Green Verde Grön	Speaker, Rear, Left Altavoz, parte posterior, izquierdo Altifalante, Parte de trás, Esquerdo Högtalare, bakre, vänster
4		Speaker, Front, Right Altavoz, parte frontal, derecho Altifalante, Parte da frente, Direito Högtalare, främre, höger	8		Speaker, Rear, Left Altavoz, parte posterior, izquierdo Altifalante, Parte de trás, Esquerdo Högtalare, bakre, vänster

Negative polarity positions 2, 4, 6, and 8 have striped cords.
Las posiciones de polaridad negativa 2, 4, 6 y 8 tienen cables con raya.
As posições 2, 4, 6 e 8 (polaridade negativa) têm cabos às riscas.
De negativa polpositionerna 2, 4, 6 och 8 har randiga kablar.

Power connection diagram

Auxiliary power connector may vary depending on the car. Check your car's auxiliary power connector diagram to make sure the connections match correctly. There are three basic types (illustrated below). You may need to switch the positions of the red and yellow leads in the car stereo's power connecting cord.

After matching the connections and switched power supply leads correctly, connect the unit to the car's power supply. If you have any questions and problems connecting your unit that are not covered in this manual, please consult the car dealer.

Diagrama de conexión de alimentación

El conector de alimentación auxiliar puede variar en función del automóvil. Compruebe el diagrama del conector de alimentación auxiliar del automóvil para asegurarse de que las conexiones coinciden correctamente. Existen tres tipos básicos, ilustrados a continuación. Es posible que sea necesario cambiar las posiciones de los cables rojo y amarillo del cable de conexión de alimentación del sistema estéreo del automóvil. Después de hacer coincidir correctamente las conexiones y los cables de alimentación conmutada, conecte la unidad al suministro de alimentación del automóvil. Si desea realizar alguna consulta o solucionar algún problema referentes a la conexión de la unidad que no aparezcan en este manual, consulte con el concesionario automovilístico.

Diagrama de ligação de corrente

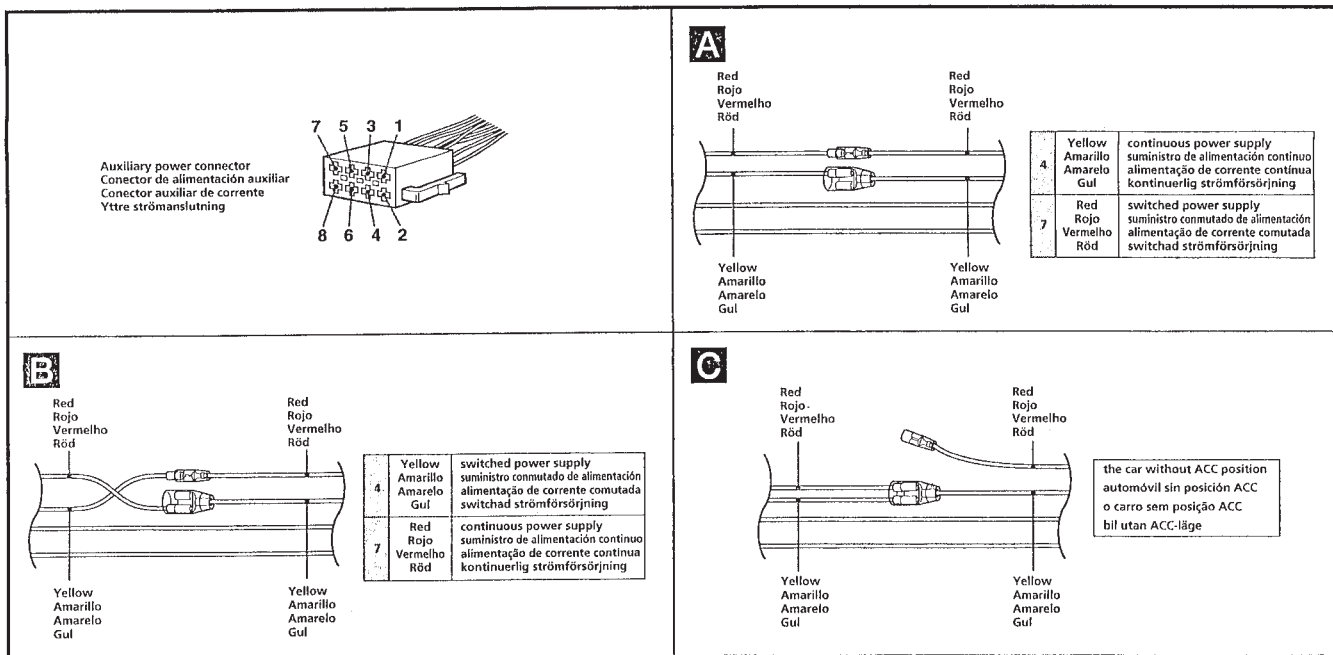
O conector auxiliar de corrente pode variar de carro para carro. Verifique o diagrama do conector auxiliar de corrente para se certificar de que as ligações estão bem feitas. Existem três tipos de conectores (ilustrados abaixo). Pode ter que mudar as posições dos cabos vermelho e amarelo do cabo de alimentação do sistema estéreo do automóvel.

Depois de fazer a correspondência entre as ligações e os pinos de alimentação de corrente comutada, ligue o aparelho à fonte de alimentação do carro. Se tiver alguma dúvida ou problema relacionado com o aparelho que não esteja incluído neste manual, consulte o concessionário.

Kopplingschema

Typen av yttre strömanslutning varierar från bil till bil. Kontrollera kopplingsdiagramet så att du ansluter på rätt sätt. Det finns tre grundläggande anslutningstyper (visas nedan). Du kan eventuellt behöva byta plats på de röda och gula kablarna i bilstereos strömanslutning.

När du har matchat ihop anslutningarna och den switchade strömförsörjningen korrekt ansluter du enheten till bilens strömförsörjning. Om du får problem eller har frågor som inte besvaras i den här bruksanvisningen kan du kontakta bilaterförsäljaren.

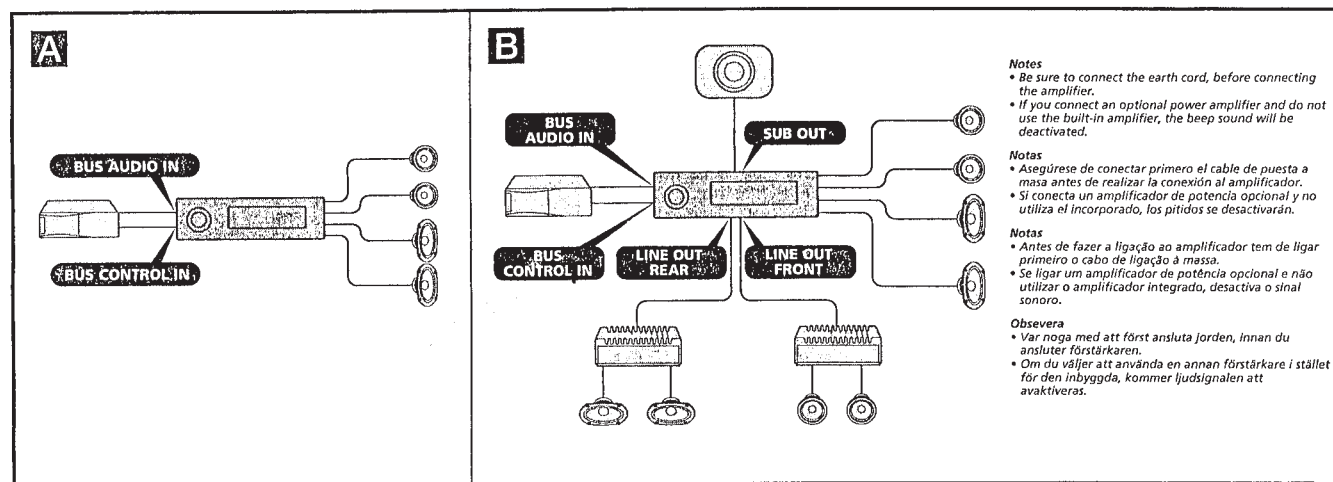
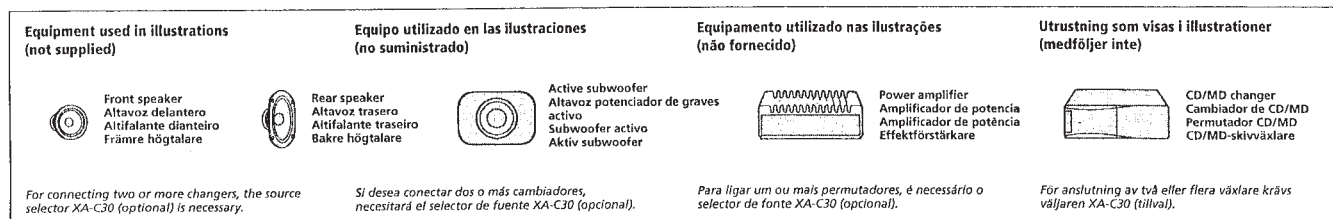


Connection diagram

Diagrama de conexiones

Diagrama de ligações

Kopplingschema



Installation for Microphone and Rotary Commander

Microphone precautions

- This system receives the driver's voice from the microphone. When it is noisy outside your car, shut the windows. Engine noise may also prevent the system from recognising the driver's voice.
- This microphone can receive sound from one direction only (directional microphone). Therefore it is important to install the microphone properly to ensure the driver's voice will be received.

Precauções relativas ao microfone

- Este sistema recebe a voz do condutor através do microfone. Se houver muito ruído no exterior, feche as janelas. O ruído do motor também pode evitar que o sistema reconheça a voz do condutor.
- Este microfone só recebe o som de uma direcção (microfone unidireccional). Deste modo, é importante instalar o microfone correctamente para garantir a recepção da voz do condutor.

Installing the Microphone

Installation location

- Install the microphone underneath the sun visor in the pushed up position. Note that when the sun visor is lowered, the microphone will not receive the driver's voice.
- Install the microphone so that the arrow on the top points toward the driver.
- Consult your dealer when installing in a car equipped with an airbag system or shock absorbing device.

Instalar o microfone

Local de instalação

- Instale o microfone por baixo da pala do sol, com esta puxada para cima. Quando baixar a pala do sol, o microfone não recebe a voz do condutor.
- Instale o microfone de forma a que a seta da parte superior aponte para o condutor.
- Consulte o concessionário, se fizer a instalação num automóvel equipado com um "airbag" ou um dispositivo que amortea os choques.

Precauciones sobre el micrófono

- Este sistema recibe la voz del conductor mediante el micrófono. Si hay ruido en el exterior, cierre las ventanillas del automóvil. El ruido del motor puede igualmente impedir que el sistema reconozca la voz del conductor.
- Este micrófono puede recibir el sonido sólo desde una dirección (micrófono direccional). Por tanto, es importante que lo instale adecuadamente con el fin de garantizar la recepción de la voz del conductor.

Observera beträffande mikrofonen

- Systemet tar emot förarens röst från mikrofonen. När det är bullrigt utanför bilen bör du stänga fönstren. Motorljud kan också hindra systemet från att känna igen förarens röst.
- Mikrofonen kan ta emot ljud endast från en riktning (riktmikrofon). Det är därför viktigt att installera mikrofonen korrekt för att garantera att förarens röst kan tas emot.

Instalación del micrófono

Ubicación de instalación

- Instale el micrófono por debajo del parasol en su posición plegada. Tenga en cuenta que cuando el parasol no esté plegado, el micrófono no recibirá la voz del conductor.
- Instale el micrófono de forma que la flecha de la parte superior quede orientada hacia el conductor.
- Para realizar la instalación en un automóvil equipado con un sistema de airbag o un dispositivo de amortiguación, consulte con su proveedor.

Installera mikrofonen

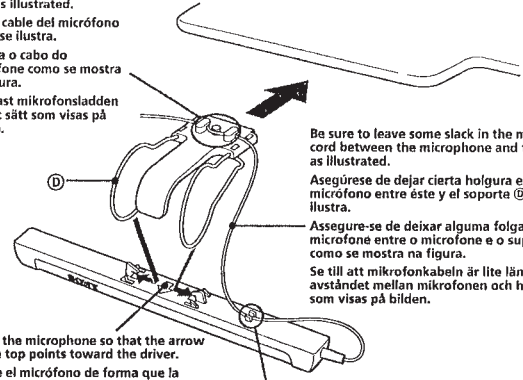
Placering

- Installera mikrofonen under solskyddet när det befinner sig i uppfällt läge. Observera att mikrofonen inte kommer att ta emot förarens röst när solskyddet är nedfällt.
- Installera mikrofonen så att pilen på ovasidan riktas mot föraren.
- Ta kontakt med din återförsäljare om du gör installationen i en bil som är utrustad med krockkudador eller någon annan liknande krocksäkerhetsutrustning.

Secure the microphone's cord as illustrated. Fije el cable del micrófono como se ilustra.

Prenda o cabo do microfone como se mostra na figura.

Sätt fast mikrofonsladden på det sätt som visas på bilden.



Be sure to leave some slack in the microphone's cord between the microphone and the holder ① as illustrated.

Asegúrese de dejar cierta holgura en el cable del micrófono entre éste y el soporte ① como se ilustra.

Assegure-se de deixar alguma folga no cabo do microfone entre o microfone e o suporte ① como se mostra na figura.

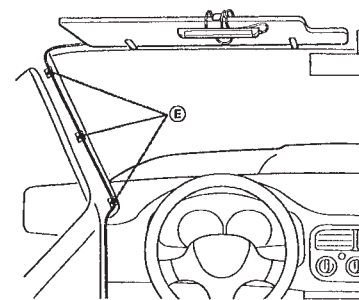
Se till att mikrofonkabeln är lite längre än avståndet mellan mikrofonen och hållaren ① som visas på bilden.

Install the microphone so that the arrow on the top points toward the driver.

Instale el micrófono de forma que la flecha de la parte superior quede orientada hacia el conductor.

Instale o microfone de forma a que a seta da parte superior aponte para o condutor.

Installera mikrofonen så att pilen på ovasidan riktas mot föraren.



Secure the wire to the window frame so that the wire does not interfere with driving. Before attaching the clamp ⑤, clean the surface thoroughly.

Fije el cable en el marco de la ventanilla de forma que dicho cable no interfiera en la conducción. Antes de fijar la abrazadera ⑤, limpie a fondo la superficie.

Fixe o fio na moldura da janela para que não interfira com a condução. Antes de colocar o grampo ⑤, limpe bem a superfície.

Fäst kabeln mot fönsterramen så att den inte stör körningen. Se till att göra ren ytan ordentligt innan du sätter fast klämma ⑤.

Connecting the microphone

- Connect the microphone to the MIC IN jack of the audio equipment.
- Bundle up the connecting cord of the microphone with other connecting cords of the audio equipment by attaching the supplied crammer ⑥. Be sure to leave some slack in the connecting cord between the plug and the crammer.

Conexión del micrófono

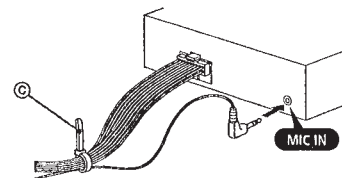
- Conecte el micrófono a la toma MIC IN del equipo de audio.
- Agrupe el cable de conexión del micrófono con el resto de cables de conexión del equipo de audio mediante el fijador de cables ⑥ suministrado. Asegúrese de dejar cierta holgura en el cable de conexión entre el enchufe y dicho fijador.

Ligar o microfone

- Ligue o microfone à ficha MIC IN do equipamento de áudio.
- Ate o cabo de ligação do microfone com os outros cabos de ligação do equipamento de áudio instalando uma braçadeira ⑥. Deixe uma folga no cabo de ligação entre a ficha e a braçadeira.

Ansluta mikrofonen

- Anslut mikrofonen till ljudutrustningens MIC IN-uttag.
- Bunta ihop mikrofonens anslutningskabel med andra anslutningskablar på ljudutrustningen genom att sätta fast kabelklämma ⑥ (medföljer). Se till att det finns ett visst utrymme på anslutningskabeln mellan kontakten och klämmen.



When you leave your car

Hide the microphone over the sun visor as illustrated to protect the microphone from being stolen.

Quando sair do automóvel

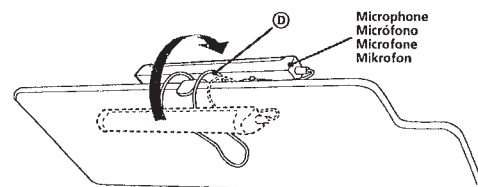
Esconda o microfone na pala como se mostra na figura para evitar que seja roubado.

Cuando salga del automóvil

Oculte el micrófono sobre el parasol como se ilustra para evitar que roben dicho micrófono.

När du lämnar bilen

Skydda mikrofonen från stöld genom att gömma den bakom solskyddet (se bilden).



Installing the rotary commander

Notes

- Choose the mounting location carefully so that the rotary commander will not interfere with operating the car.
- Do not install the rotary commander in a place where it may jeopardise the safety of the (front) passenger in anyway.
- When installing the rotary commander, be sure not to damage the electrical cables, etc. on the other side of the mounting surface.
- Avoid installing the rotary commander where it may be subject to high temperatures, such as from direct sunlight or hot air from the heater, etc.

Instalación del mando rotativo

Notes

- Elija cuidadosamente el lugar de montaje de forma que el mando rotativo no dificulte la conducción del coche.
- No instale el mando rotativo en un lugar donde pueda poner en peligro la seguridad del pasajero acompañante.
- Al instalar el mando rotativo, asegúrese de no dañar los cables de electricidad, etc., del otro lado de la superficie de montaje.
- Procure no instalar el mando rotativo en un lugar expuesto a altas temperaturas, como a la luz solar directa o al aire caliente de la calefacción, etc.

Instalação do comando rotativo

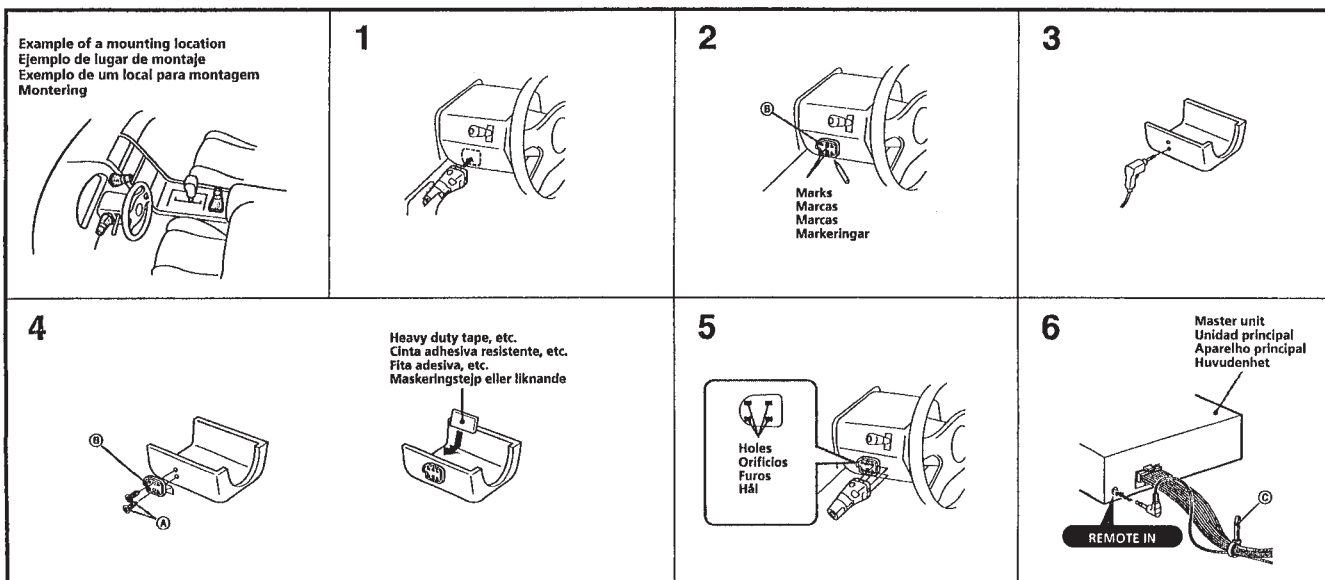
Notes

- Selecione cuidadosamente o local de montagem de forma a que o comando rotativo não interfira com a condução do automóvel.
- Não instale o comando rotativo em locais onde este possa, por algum motivo, pôr em perigo a segurança do passageiro da frente.
- Quando da instalação do comando rotativo, certifique-se de que não danifica os fios elétricos, etc., localizados no outro lado da superfície de montagem.
- Evite instalar o comando rotativo em locais em que este fique exposto a temperaturas elevadas causadas, por exemplo, pela incidência directa dos raios solares, pelo ar quente do aquecimento, etc.

Installera vridkontrollen

Obs!

- Var noga med var du monterar vridkontrollen så att den inte är i vägen när du kör.
- Installera inte vridkontrollen där den utgör en säkerhetsrisk för passagerare i framsätet.
- Var försiktig när du installerar vridkontrollen så att du inte skadar elkablar eller liknande på monteringsytans baksida.
- Undvik att installera vridkontrollen så att den utsätts för höga temperaturer, direkt solljus eller stark värme från värmefläkten osv.



- 1 Choose the exact location for the rotary commander to be mounted, then clean the mounting surface.
Dirt or oil impair the adhesive strength of the double-sided adhesive tape.

- 2 Mark position for the supplied screw.
Use the screw hole on the mounting hardware ⑥ to mark the position.
If you cannot make the mounting hardware ⑥ fit easy; cut the mounting hardware ⑥ to fit the steering wheel column cover.

- 3 Remove the steering wheel column cover, and drill 2 mm diameter hole where you have marked.

- 4 Warm the mounting surface and the double-sided adhesive tape on the mounting hardware ⑥ to the temperature of 20°C to 30°C, and attach the mounting hardware onto the mounting surface by applying even pressure. Then screw it down with the supplied screw ④.
Attach a piece of heavy duty tape, etc. on the other side of the mounting surface to cover the protruding tip of the screw so that they will not interfere with the electrical cables, etc. inside the steering wheel column.

- 5 After installing the steering wheel column cover, attach the rotary commander to the mounting hardware by aligning the four holes on the bottom of the rotary commander to the four catches on the mounting hardware and sliding the rotary commander until it locks into place as illustrated.

- Note
If you are mounting the rotary commander to the steering wheel column, make sure that the protruding tip of the screw on the inner surface of the column do not in anyway hinder or interfere with the movement of the rotating shaft, operative parts of the switches or the electrical cables, etc. inside the column.

- 6 After connecting, bundle up the connecting cord of the rotary remote with other connecting cords of the audio equipment by attaching the supplied crammer ⑤. Be sure to leave some slack in the connecting cord between the plug and the crammer as illustrated.

- 1 Una vez elegido el lugar de montaje del mando rotativo, limpie previamente la superficie de montaje.
La suciedad o la grasa reducen el poder adherente de la cinta adhesiva de dos caras.

- 2 Marque la posición para el tornillo suministrado.
Para ello, utilice el orificio para tornillo de la ferretería de montaje ⑥.
Si no es posible instalar con facilidad la pieza ⑥, córtela de forma que encaje en la cubierta de la columna de dirección.

- 3 Extraiga la cubierta de la columna de dirección y haga orificios de 2 mm. de diámetro en los lugares marcados.

- 4 Caliente la superficie de montaje y la cinta adhesiva de doble cara de la ferretería de montaje ⑥ a una temperatura de entre 20°C y 30°C y ajuste la ferretería de montaje a la superficie de montaje ejerciendo una presión uniforme. A continuación, apriete el tornillo ④ suministrado.
Adhiere un trozo de cinta adhesiva resistente, etc., en el otro lado de la superficie de montaje para cubrir el extremo sobresaliente del tornillo, de forma que no interfiera con los cables eléctricos, etc., del interior de la columna de dirección.

- 5 Una vez instalada la cubierta de la columna de dirección, fije el mando rotativo a la ferretería de montaje alineando los cuatro orificios de la parte inferior del mando con los cuatro enganches de la ferretería de montaje. A continuación, deslice el mando hasta que encaje en su sitio, como se muestra en la ilustración.

- Note
Si monta el mando rotativo en la columna de dirección, asegúrese de que el extremo sobresaliente del tornillo de la superficie interior de la columna no dificulte de ninguna forma el movimiento del eje de rotación, los componentes operativos de los conmutadores o los cables eléctricos, etc., del interior de la columna.

- 6 Una vez realizada la conexión, recoja el cable de conexión del mando con el resto de los cables de conexión del equipo de audio mediante el fijador de cables ⑤ suministrado. Como muestra la ilustración, procure dejar un espacio en el cable de conexión entre el enchufe y el fijador de cables.

- 1 Escolha o local exacto onde deseja montar o comando rotativo e depois limpe a superfície de montagem.
A sujidade ou o óleo diminui as capacidades adesivas da fita adesiva dupla.

- 2 Marque a posição para o parafuso fornecido.
Para marcar a posição, utilize o orifício do parafuso do material de montagem ⑥.
Se a peça ⑥ não encaixar com facilidade, corte-a de forma a ajustar-se à coluna da direcção.

- 3 Retire a cobertura da coluna da direcção e faça furos com 2 mm de diâmetro nos locais marcados.

- 4 Aqueça a superfície de montagem e a fita adesiva dupla da peça ⑥ até uma temperatura de 20°C a 30°C, e fixe a peça na superfície respectiva exercendo uma pressão uniforme. Em seguida, fixe com o parafuso ④ fornecido.
Coloque um pouco de fita adesiva, etc. no outro lado da superfície de montagem para tapar a protuberância do parafuso, de forma a que estes não interfira com os cabos eléctricos, etc., localizados no interior da coluna da direcção.

- 5 Após a instalação da cobertura da coluna da direcção, fixe o comando rotativo à peça, alinhando os quatro orifícios da extremidade inferior do comando com as quatro buchas da peça e fazendo deslizar o comando até que este se fixe correctamente, conforme o ilustrado.

- Note
Se montar o comando rotativo na coluna da direcção, certifique-se de que a protuberância do parafuso na superfície interior da coluna não prejudica ou interfere com o movimento do eixo rotativo, com as partes operativas dos comutadores ou com os cabos eléctricos, etc., localizados no interior da coluna.

- 6 Depois de ter efectuado a ligação, una o cabo de ligação do comando aos outros cabos de ligação do equipamento áudio mediante a utilização da braçadeira ⑤ fornecida. Deixe alguma folga no cabo de ligação entre a ficha e a braçadeira, conforme a ilustração.

- 1 Välj var du vill montera vridkontrollen och rengör ytan.
Smuts eller olja minskar den dubbelsidiga tejpens fästförmåga.

- 2 Markera var du ska borra hål för skruvarna.
Du kan göra markeringen utifrån skruvhålet på monteringsdelen ⑥.
Om du inte får monteringsdelen ⑥ att passa; skär den ⑥ så att den passar höjlet som skyddar rattens styrstång.

- 3 Ta loss höjlet som skyddar rattens styrstång och borra hål med 2 mm diameter där du har gjort markeringarna.

- 4 Värm monteringsytan och den dubbelsidiga tejp på monteringsdelen ⑥ till mellan 20°C och 30°C och tryck fast monteringsdelen. Skruva sedan fast den med den medföljande skruven ④.
Fäst en bit stark tejp eller liknande på monteringsytans andra sida så att den utskjutande delen av skruven täcks så undviker du att den skadar elektriska kablar eller liknande som är dragna inuti rattstångens hölje.

- 5 När du har satt tillbaka styrstångshöjlet fäster du vridkontrollen på monteringsdelen genom att justera de fyra hålen på kontrollens undersida efter de fyra spårrarna på monteringsdelen och skjuta ned kontrollen tills den låses på plats, se bilden.

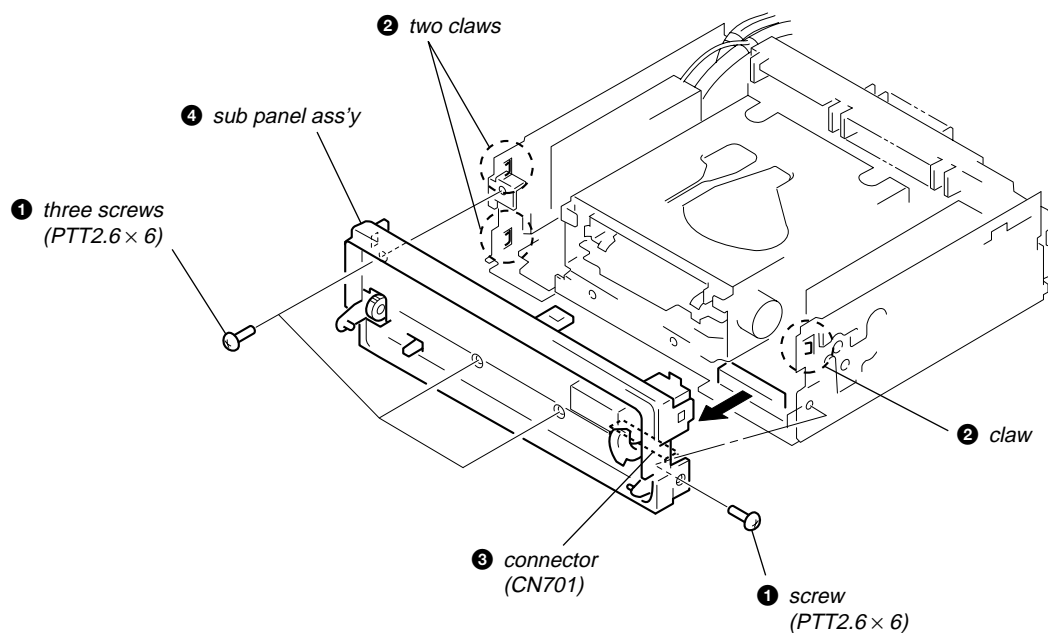
- Obs!
Om du monterar vridkontrollen på sidan av rattstången måste du se till att den utstickande delen av skruven på insidan av rattstångshöjlet inte påverkar rattörelserna eller att den trasslar in sig i omkopplare eller kablage som är draget in i höjlet.

- 6 När du är klar fäster du ihop sladden till vridkommandot och andra sladdar till ljudutrustningen med medföljande krampa ⑤. Se till så att sladdarna mellan kontakten och fästarrordningen inte blir för hårt spända, se bilden.

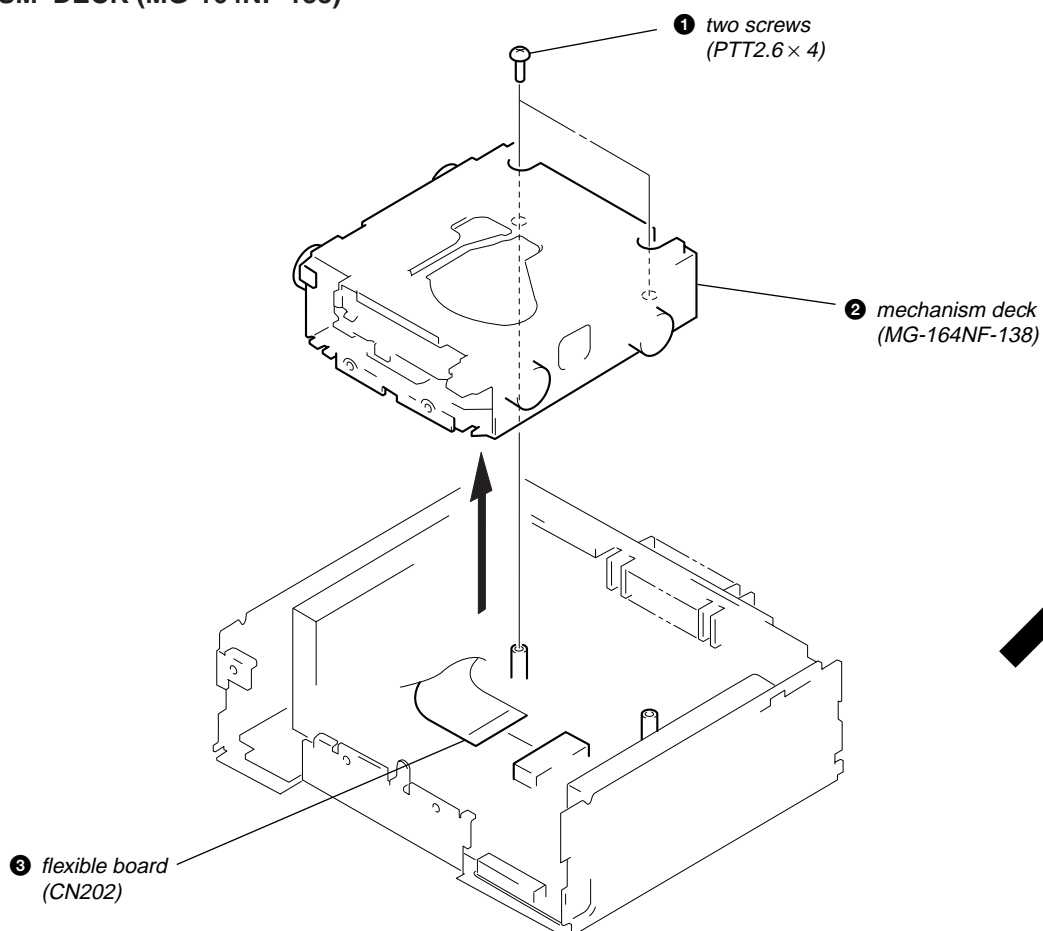
SECTION 3 DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

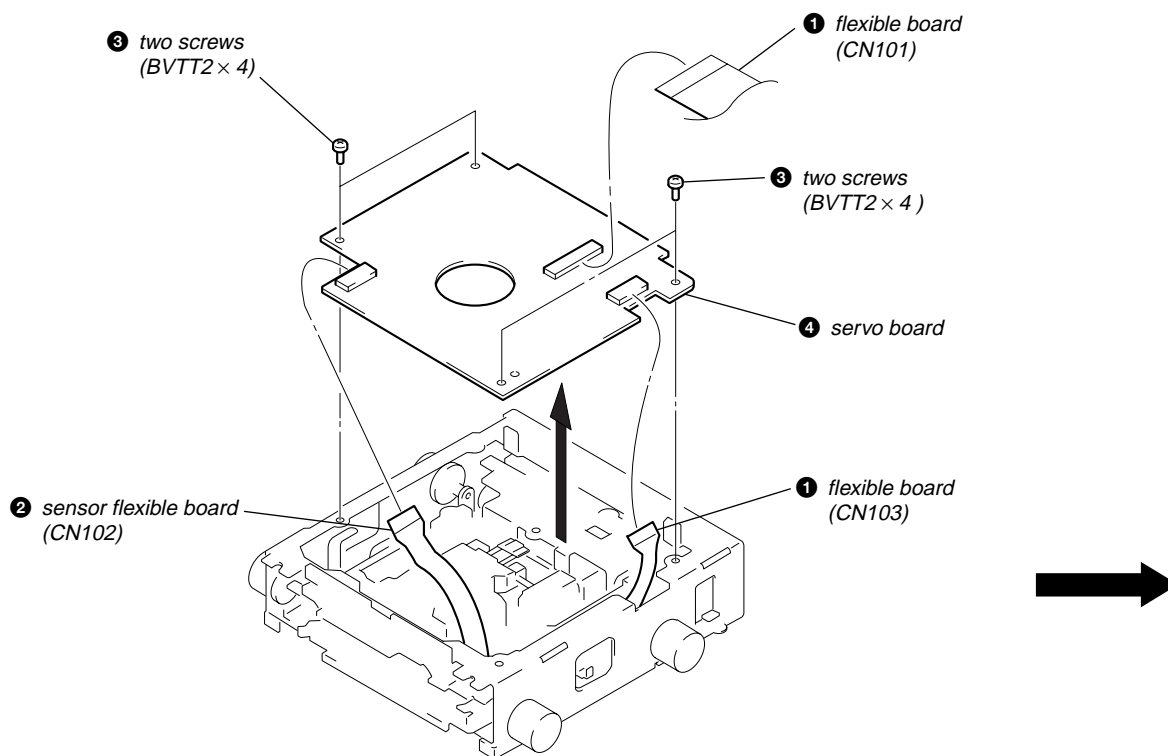
SUB PANEL ASS'Y



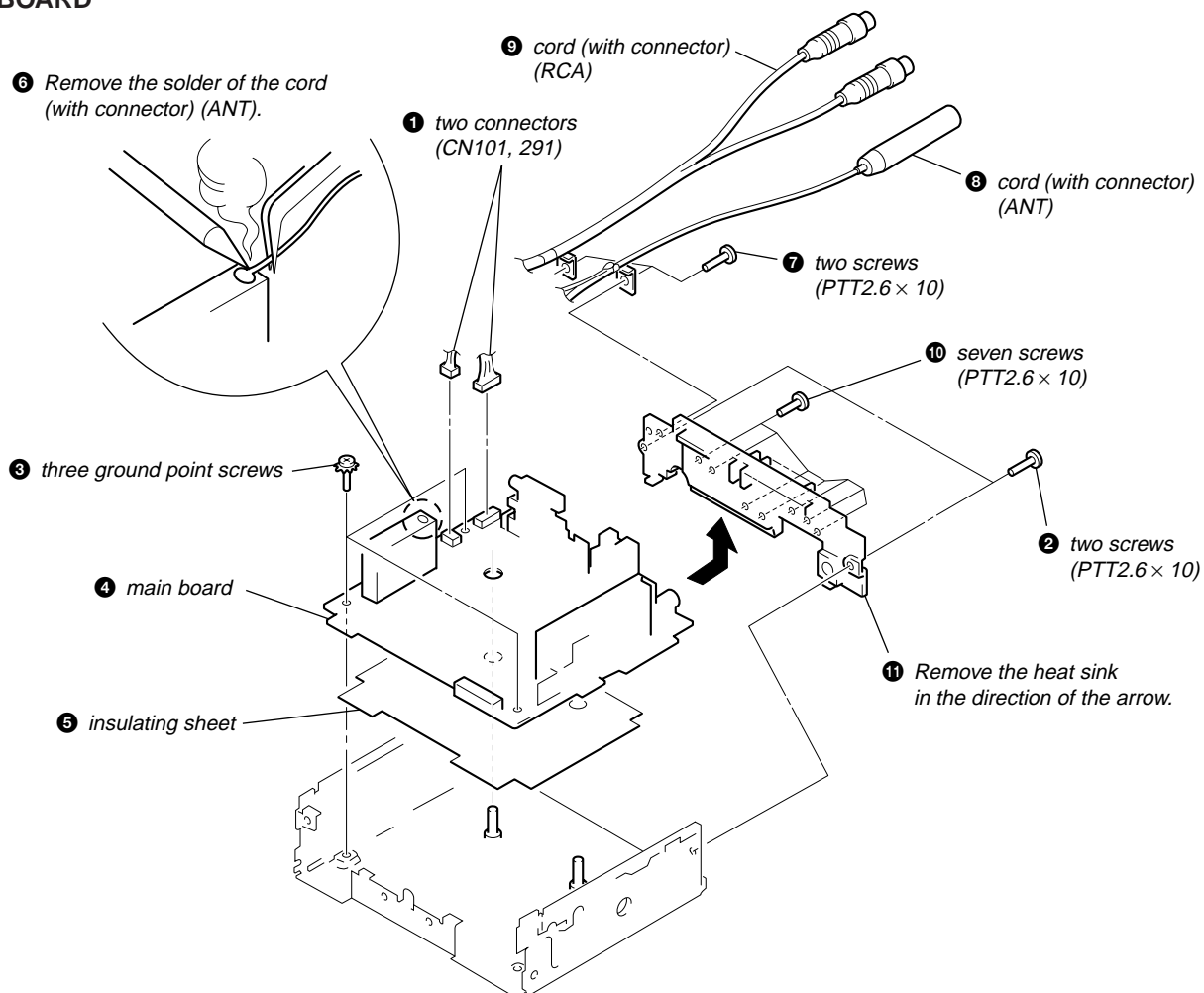
MECHANISM DECK (MG-164NF-138)



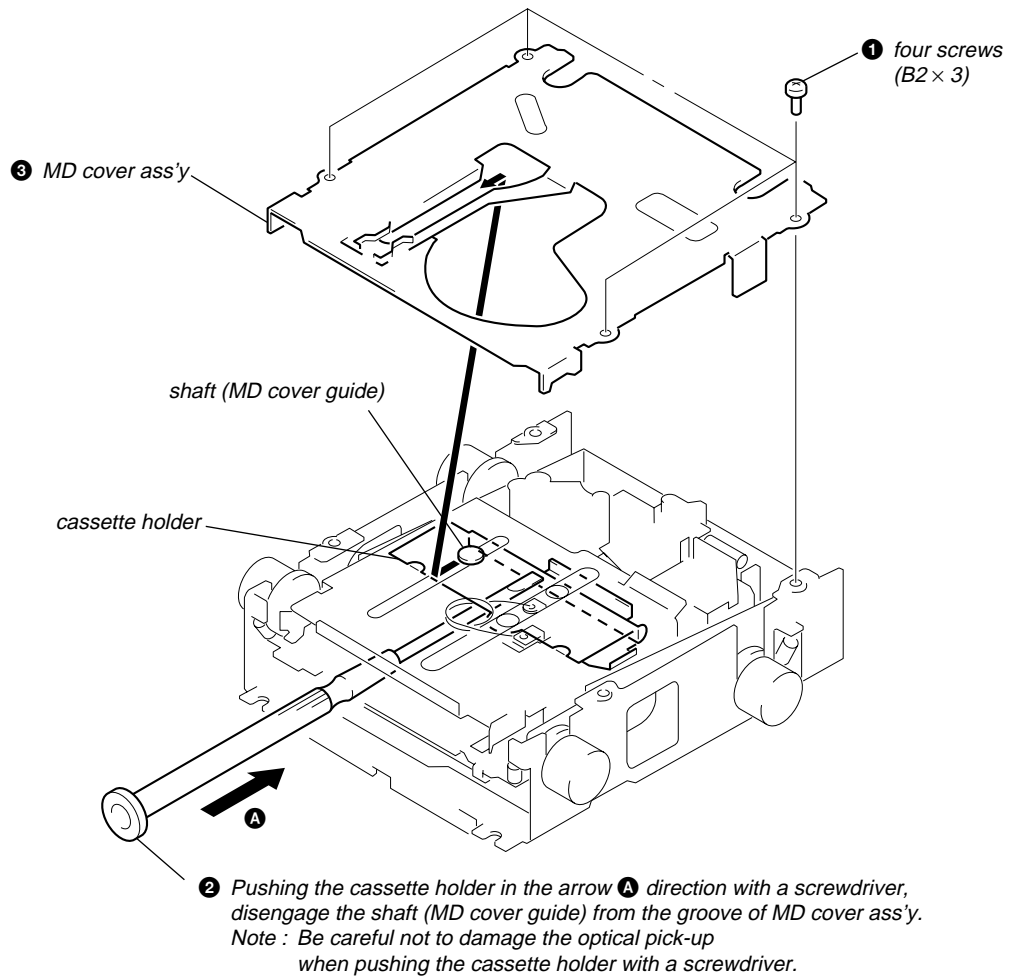
SERVO BOARD



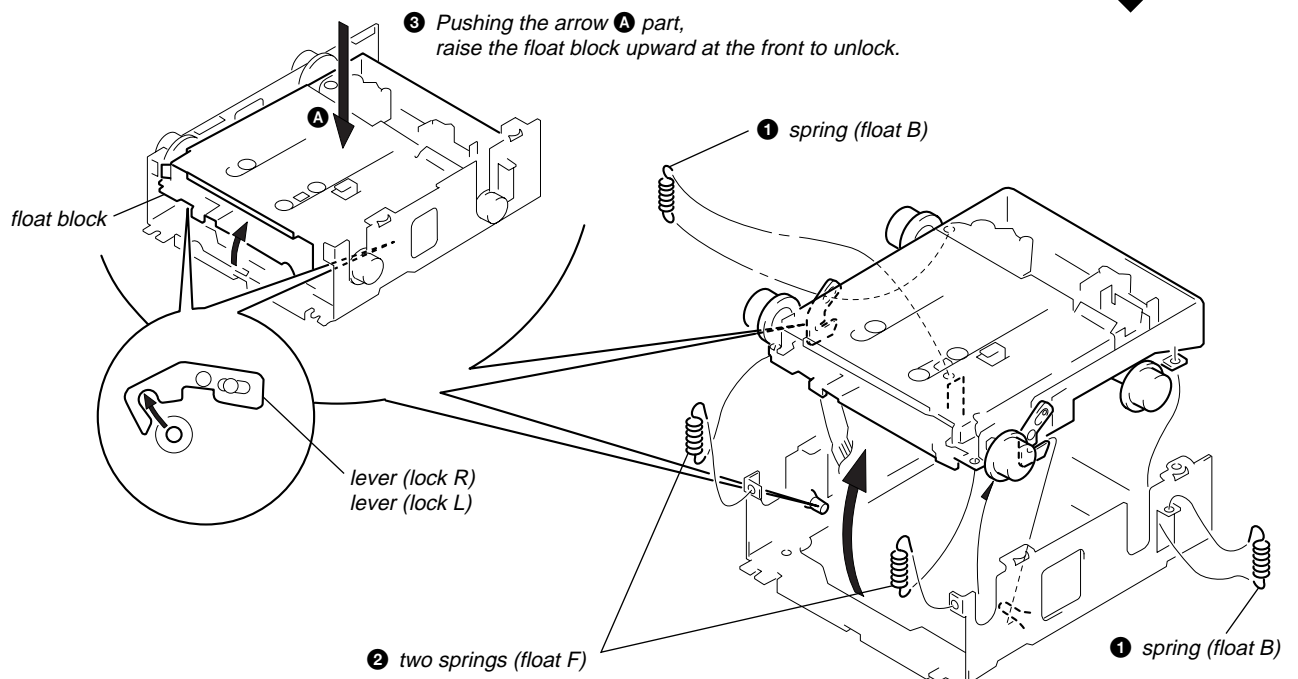
MAIN BOARD



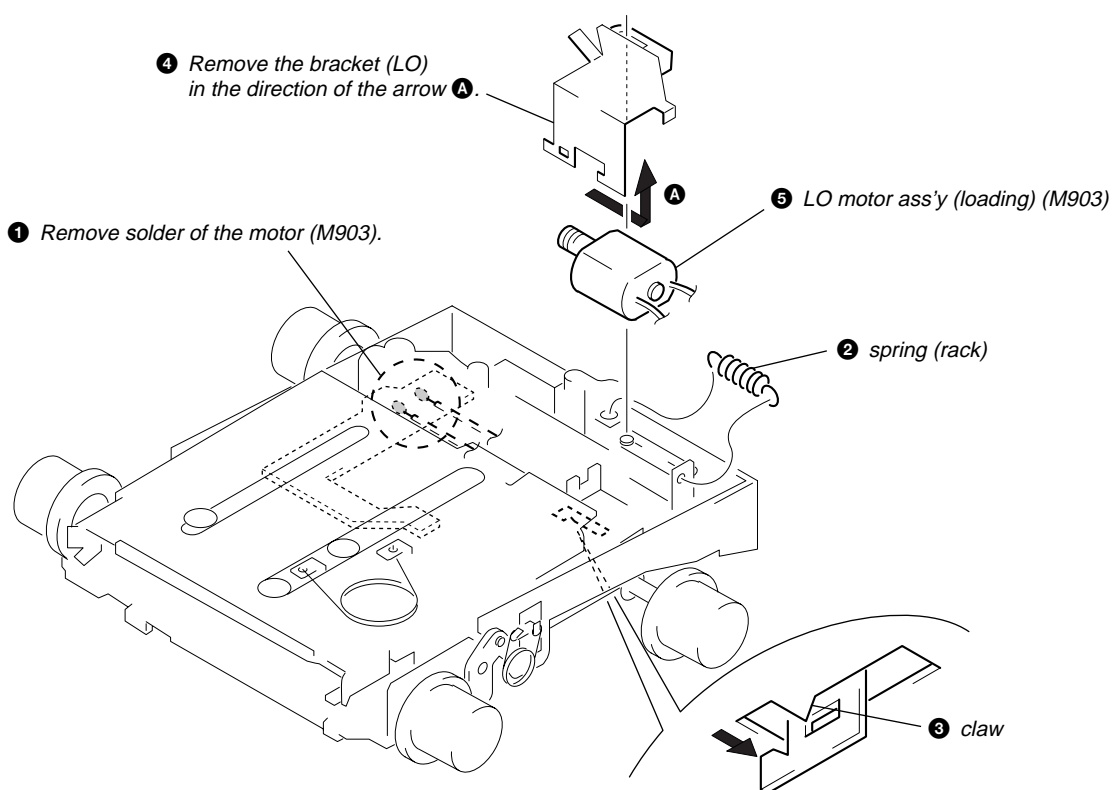
MD COVER ASS'Y



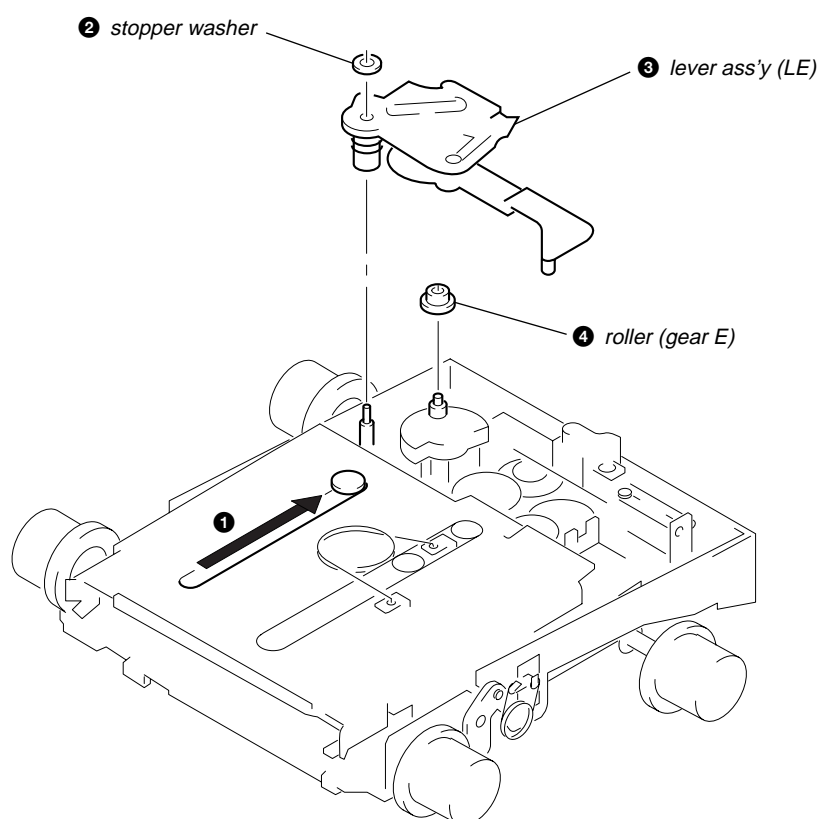
FLOAT BLOCK



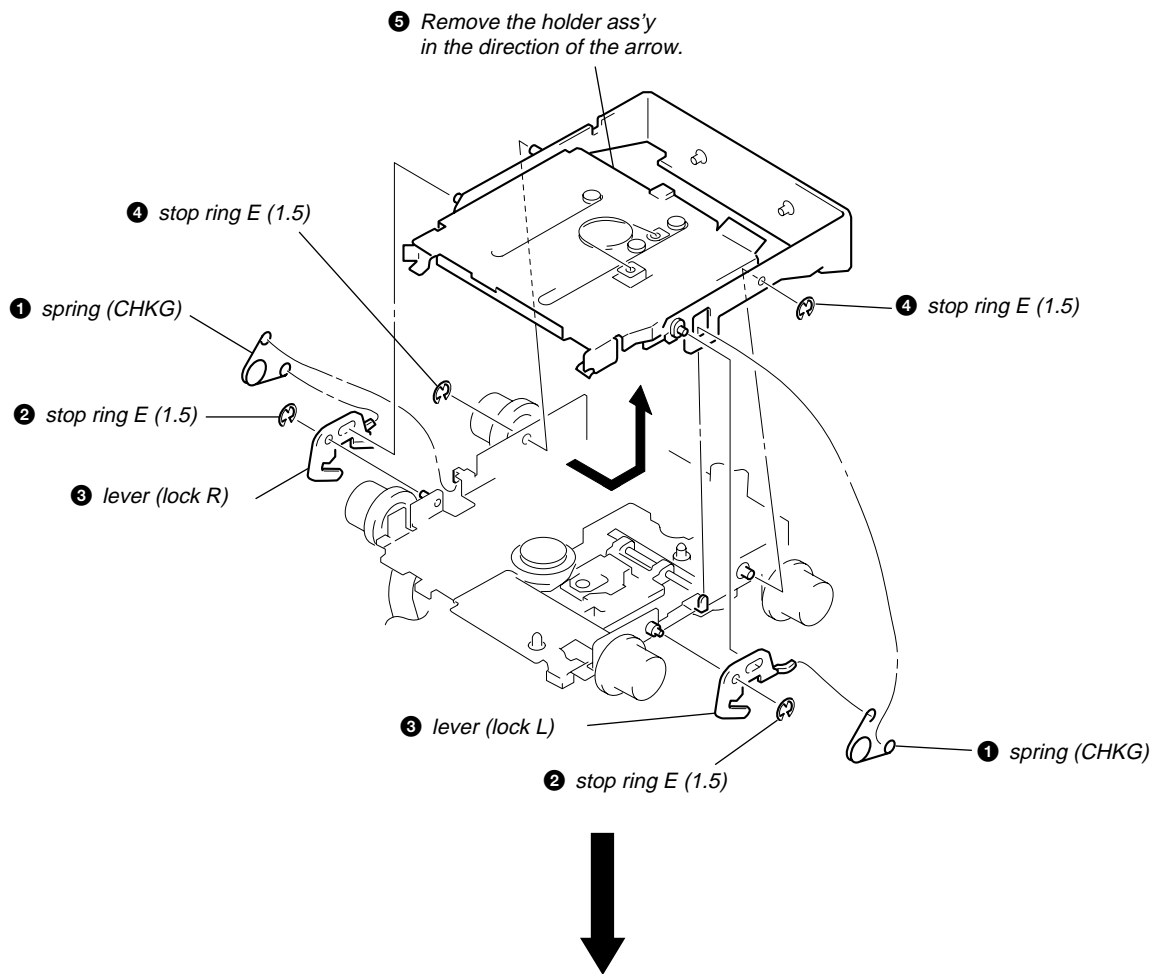
LO MOTOR ASS'Y (LOADING) (M903)



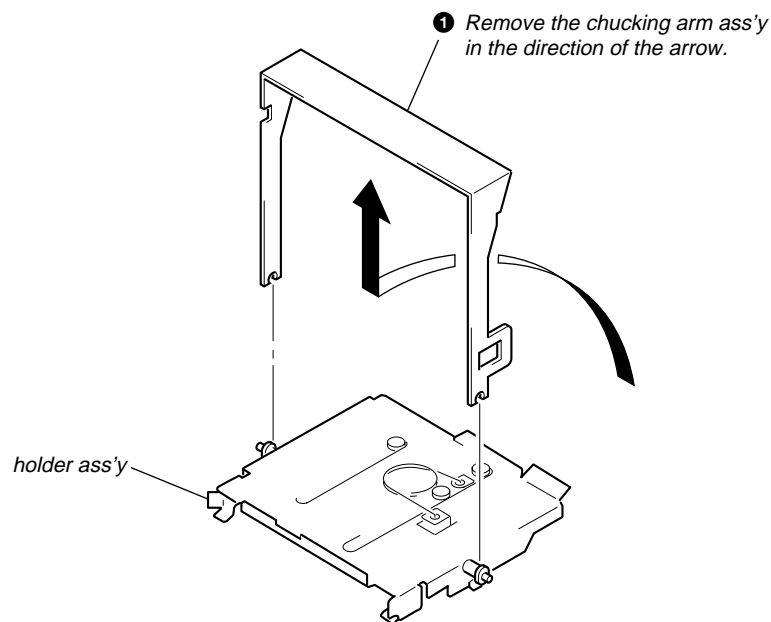
LEVER ASS'Y (LE)



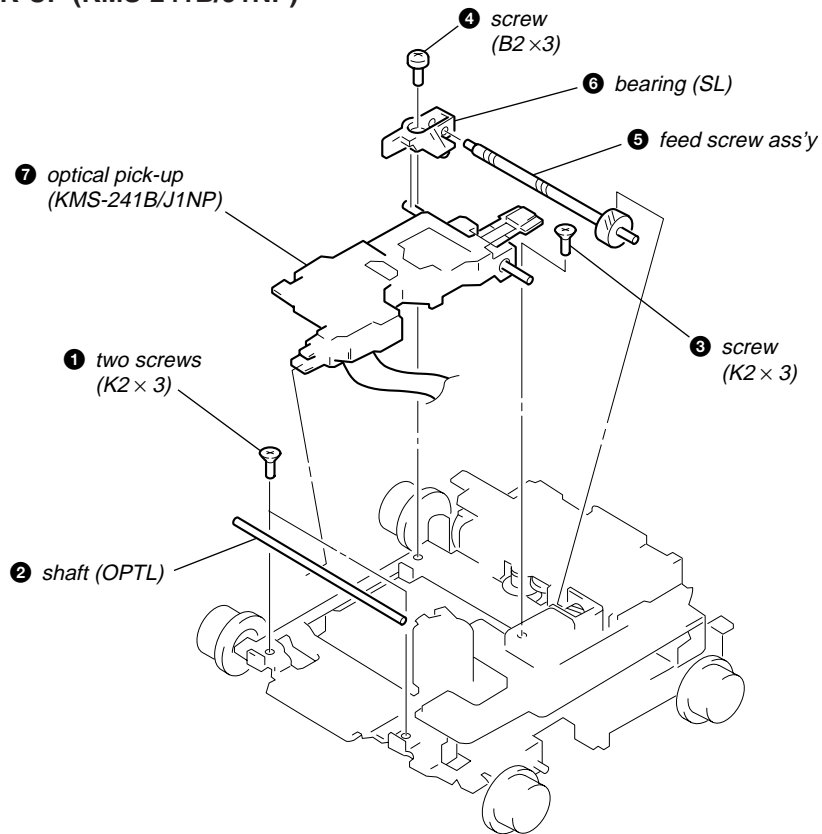
HOLDER ASS'Y



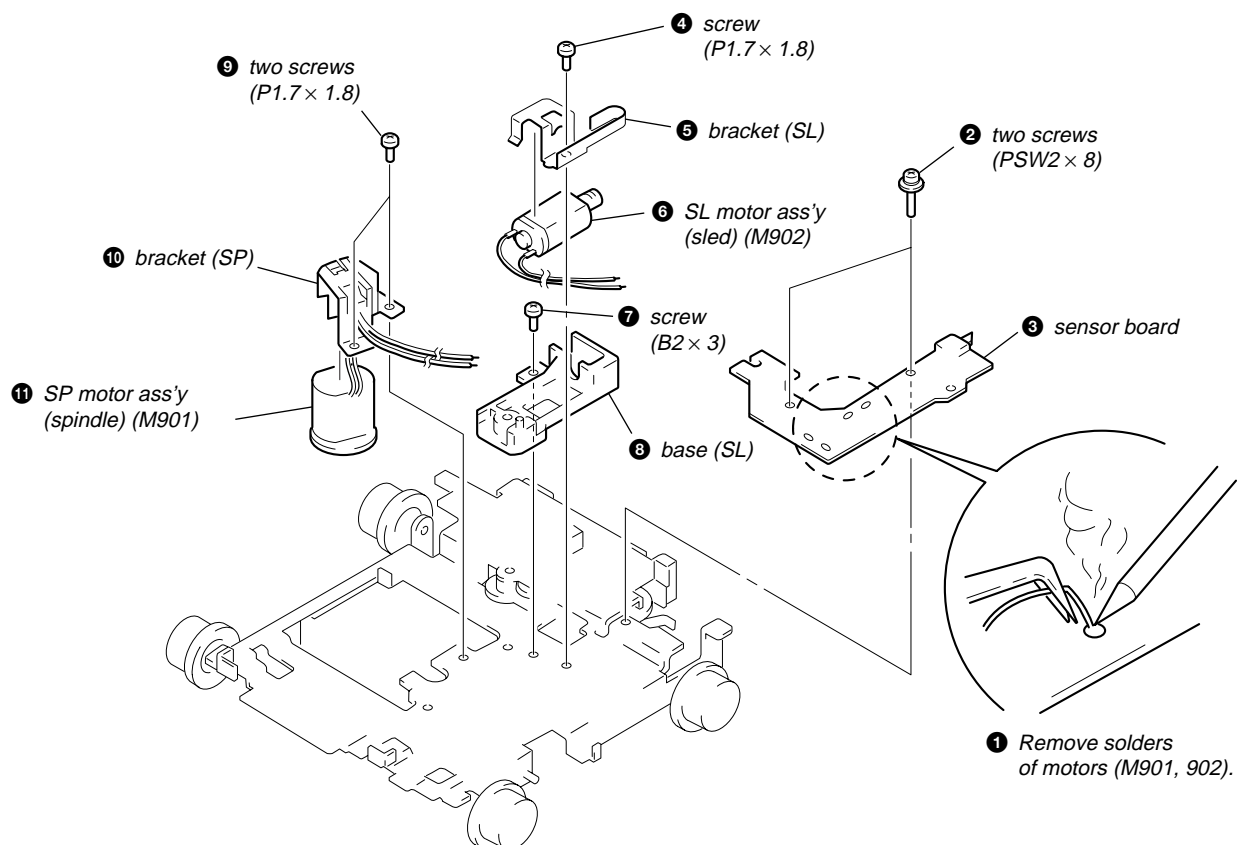
CHUCKING ARM ASS'Y



OPTICAL PICK-UP (KMS-241B/J1NP)



SL MOTOR ASS'Y (SLED) (M902)/SP MOTOR ASS'Y (SPINDLE) (M901)



SECTION 4 ELECTRICAL ADJUSTMENTS

TEST MODE

This set have the test mode function. In the test mode, FM Auto Scan/Stop Level and MW Auto Scan/Stop Level adjustments can be performed easier than it in ordinary procedure.

<Set the Test Mode>

1. Turn ON the regulated power supply. (All LEDs on the set lights up, and the clock is displayed.)
Note: Press the **[OFF]** button, if the clock is not displayed.
2. Push the preset **[4]** button.
3. Push the preset **[5]** button.
4. Press the preset **[1]** button for more than two seconds.
5. Then the display indicates all lights, the test mode is set.

<Release the Test mode>

1. Push the **[OFF]** button.

See the adjustment location from on page 20 for the adjustment.

MD SECTION

MD section adjustments are done automatically in this set.

TUNER SECTION

0 dB=1 μ V

Cautions during repair

When the tuner unit is defective, replace it by a new one because its internal block is difficult to repair.

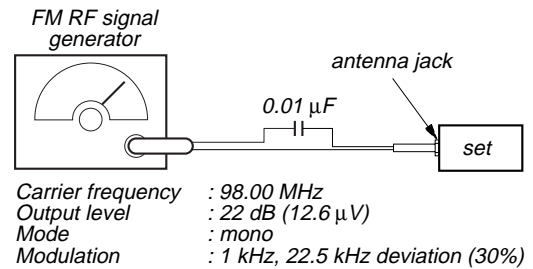
Note: Adjust the tuner section in the sequence shown below.

1. FM Auto Scan/Stop Level Adjustment
2. FM Stereo Separation Adjustment (Wide)
3. FM Stereo Separation Adjustment (Narrow)
4. FM RDS S-Meter Adjustment
5. MW Auto Scan/Stop Level Adjustment

FM Auto Scan/Stop Level Adjustment

Setting:

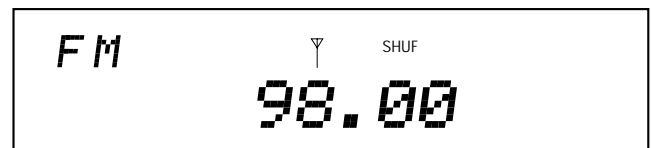
[SOURCE] button : FM



Procedure:

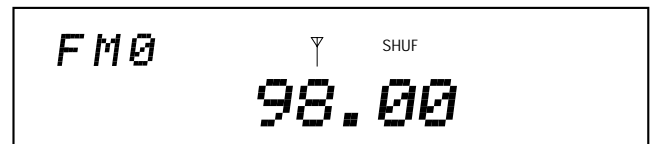
1. Set to the test mode.
2. Push the **[SOURCE]** button and set to FM.

Display



3. Adjust the volume RV2 on TU101 by turning clockwise until "0" is shown next to "FM" on the display window, If "0" is already shown or the volume RV2 has been turned too far, turn it back counterclockwise until "0" is disappeared once, then try this adjustment.

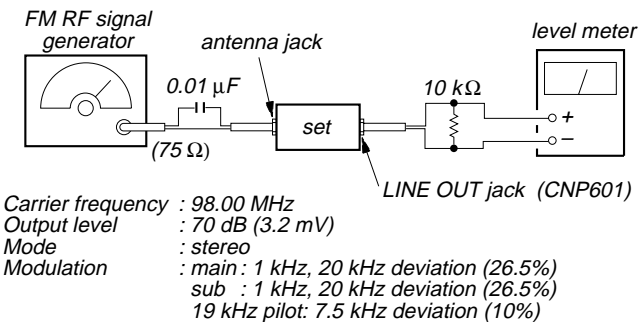
Display



Adjustment Location: See page 20.

FM Stereo Separation Adjustment (Wide)

Setting:
[SOURCE] button : FM



Procedure:

1. Set to the test mode. (See page 17)
2. Push the [SHIFT] button.
3. Push the [4] button four times.
4. Push the [5] button once and set to wide mode.
5. Adjust the volume RV3 on FM/AM tuner unit (TU101) for the best separation.

FM Stereo signal generator output channel	Level meter connection	Level meter reading (dB)
L-CH	L-CH	Ⓐ
L-CH	R-CH	Ⓑ Adjust RV3 on TU101 for minimum reading.
R-CH	R-CH	Ⓒ
R-CH	L-CH	Ⓓ

L-CH Stereo separation: Ⓐ-Ⓑ

R-CH Stereo separation: Ⓒ-Ⓓ

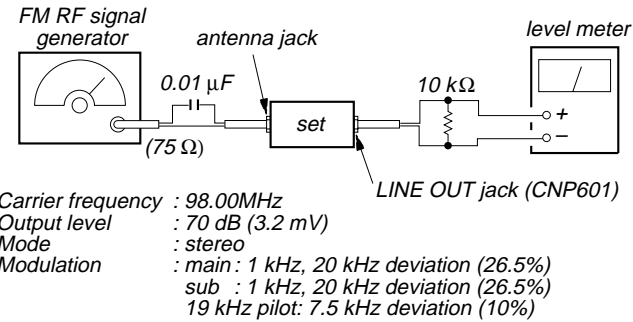
The separations of both channels should be equal.

Specification: Separation more than 24 dB

Adjustment Location: See page 20.

FM Stereo Separation Adjustment (Narrow)

Setting:
[SOURCE] button : FM



Procedure:

1. Set to the test mode. (See page 17)
2. Push the [SHIFT] button.
3. Push the [4] button four times.
4. Push the [5] button twice and set to narrow mode.
5. Adjust the volume RV4 on FM/AM tuner unit (TU101) for the best separation.

FM Stereo signal generator output channel	Level meter connection	Level meter reading (dB)
L-CH	L-CH	Ⓐ
L-CH	R-CH	Ⓑ Adjust RV4 on TU101 for minimum reading.
R-CH	R-CH	Ⓒ
R-CH	L-CH	Ⓓ

L-CH Stereo separation: Ⓐ-Ⓑ

R-CH Stereo separation: Ⓒ-Ⓓ

The separations of both channels should be equal.

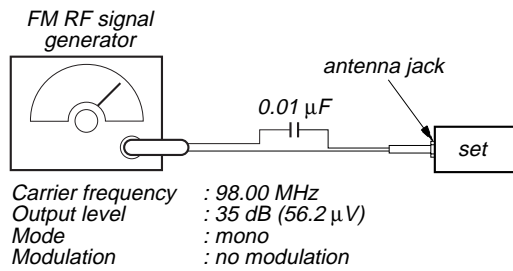
Specification: Separation more than 18 dB

Adjustment Location: See page 20.

FM RDS S-Meter Adjustment

Setting:

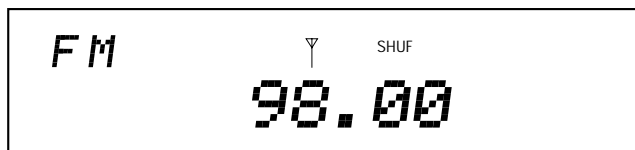
[SOURCE] button : FM



Procedure:

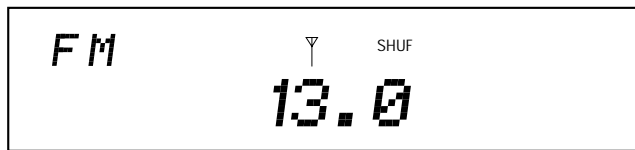
1. Set to the test mode. (See page 17)
2. Push the [SOURCE] button and set to FM.

Display



3. Push the preset [10] button .
4. Adjust RV131 on MAIN board so that the display indication is "13.0".

Display



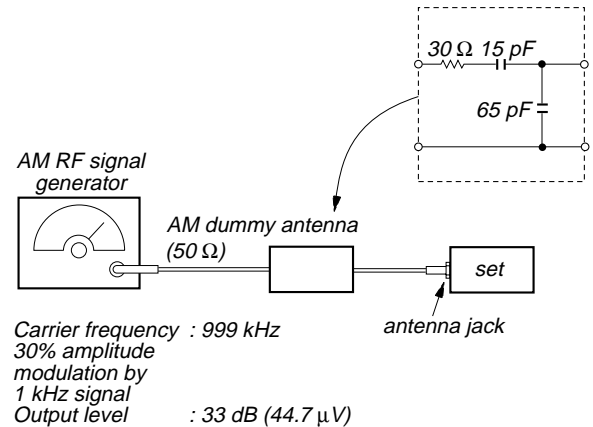
Specification: Display indication: 12.8 to 13.2.

Adjustment Location: See page 20.

MW Auto Scan/Stop Level Adjustment

Setting:

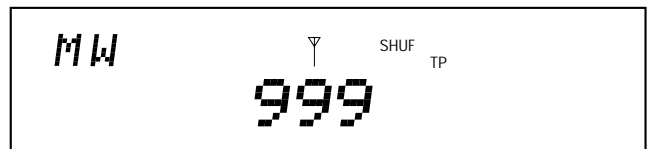
[SOURCE] → [MODE] button : MW



Procedure:

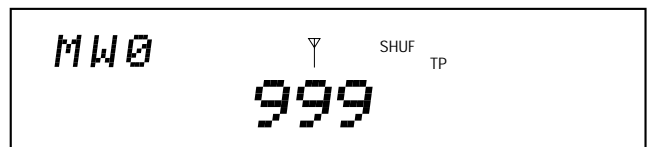
1. Set to the test mode. (See page 17)
2. Push the [SOURCE] button and set to FM.
3. Push the [MODE] button and set to MW.

Display



4. Adjust the volume RV1 on TU101 by turning clockwise until "0" is shown next to "MW" on the display window. If "0" is already shown or the volume RV1 has been turned too far, turn it back counterclockwise until "0" is disappeared once, then try this adjustment.

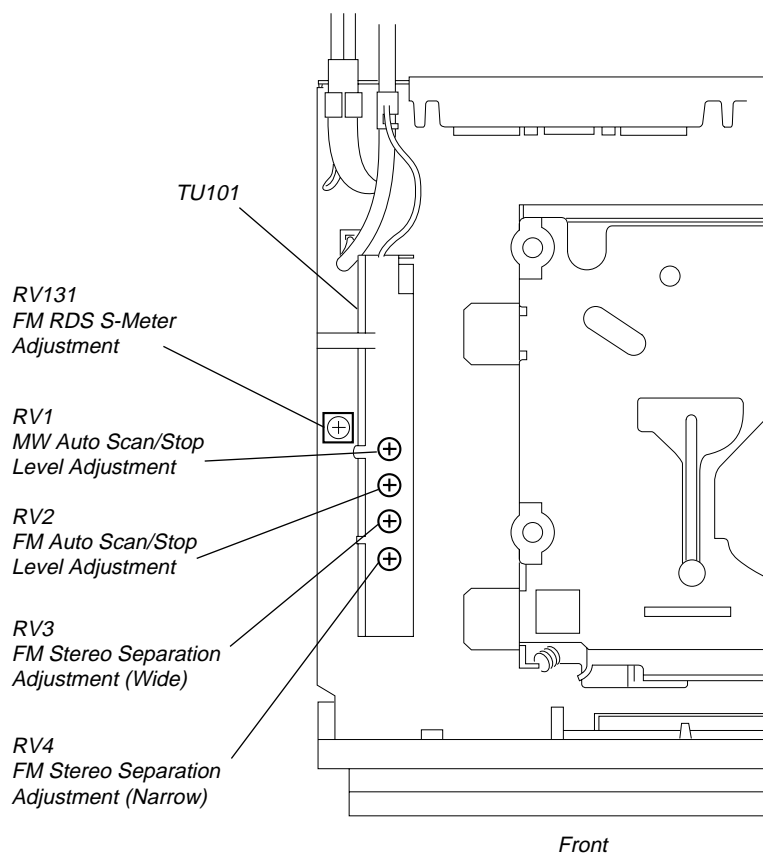
Display



Adjustment Location: See page 20.

Adjustment Location:

– SET UPPER VIEW –



5-1. BLOCK DIAGRAM – SERVO Section –

5-1. BLOCK DIAGRAM – SERVO Section –

• SIGNAL PATH
➤ : MD PLAY

OPTICAL PICK-UP (KMS-241B/J1NP)

IC301 (1/2): DIGITAL SIGNAL PROCESSOR, EFM/ACIRC ENCODER/DECODER, SHOCK PROOF MEMORY CONTROLLER, ATRAC ENCODER/DECODER, 2M BIT D-RAM

IC302: RF AMP, FOCUS/TRACKING ERROR AMP

IC303: FOCUS/TRACKING COIL DRIVE, SPINDLE/SLED MOTOR DRIVE

IC304: 512FS BUFFER

IC305: MD MECHANISM CONTROLLER

IC306: LEVEL SHIFT

IC307: D-RAM

IC308: CPU INTERFACE

IC309: MONITOR CONTROL

IC310: SERIAL/PARALLEL CONVERTER, DECODER

IC311: V-I CONVERTER

IC312: I-V AMP

IC313: AT AMP

IC314: ABCD AMP

IC315: FOCUS ERROR AMP

IC316: TRACKING ERROR AMP

IC317: PEAK & BOTTOM

IC318: ADIP DEMODULATOR/DECODER

IC319: SUBCODE PROCESSOR

IC320: SPINDLE SERVO

IC321: LEVEL SHIFT

IC322: LEVEL SHIFT

IC323: ANALOG MUX

IC324: A/D CONVERTER

IC325: DIGITAL SERVO SIGNAL PROCESS

IC326: AUTO SEQUENCER

IC327: P.W.M. GENERATOR

IC328: AUTOMATIC POWER CONTROL

IC329: PEAK HOLD

IC330: AUTOMATIC POWER CONTROL

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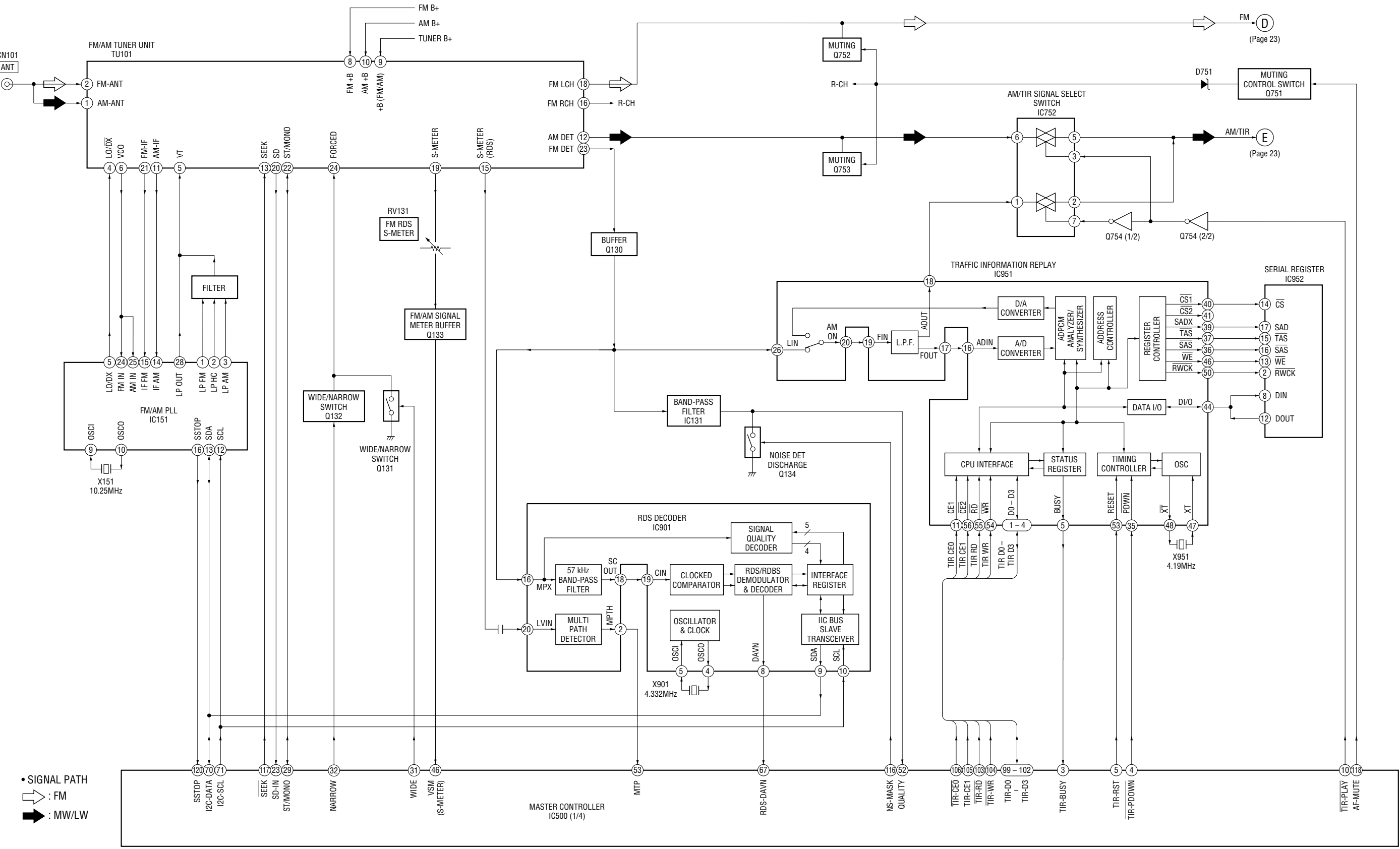
IC511: AUTOMATIC POWER CONTROL

IC512: AUTOMATIC POWER CONTROL

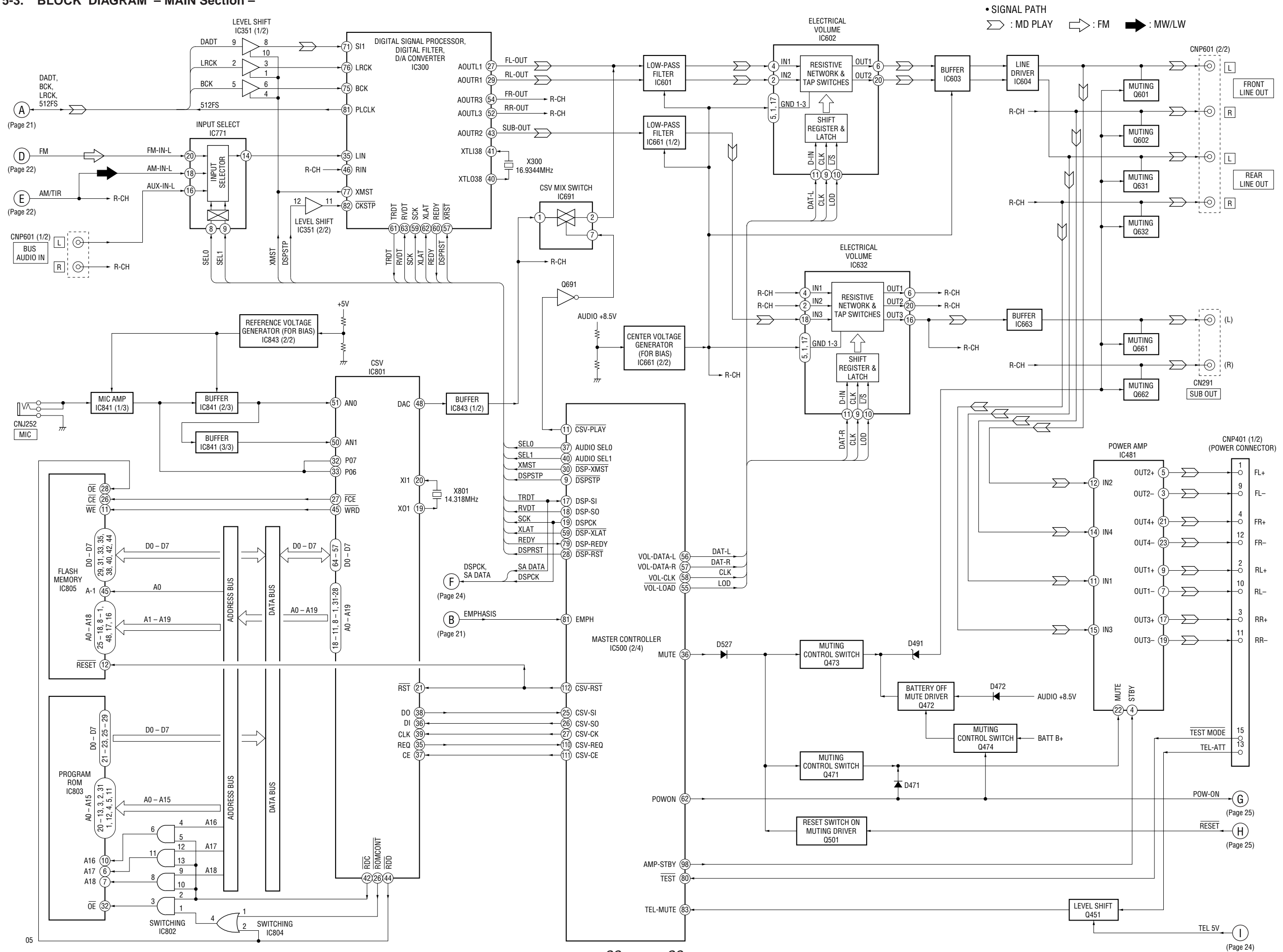
IC513: AUTOMATIC POWER CONTROL

IC514: AUTOMATIC POWER CONTROL

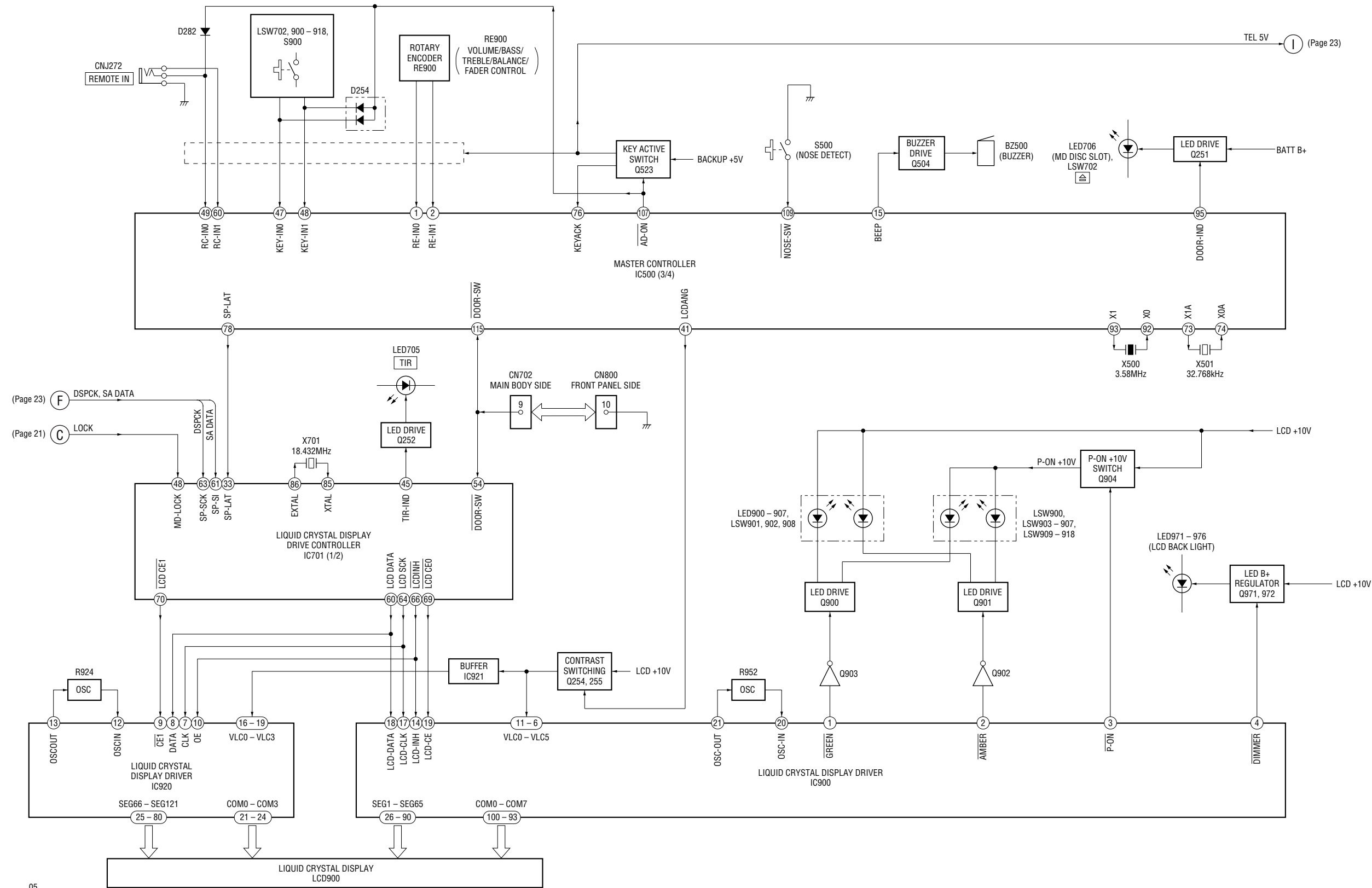
5-2. BLOCK DIAGRAM – TUNER Section –



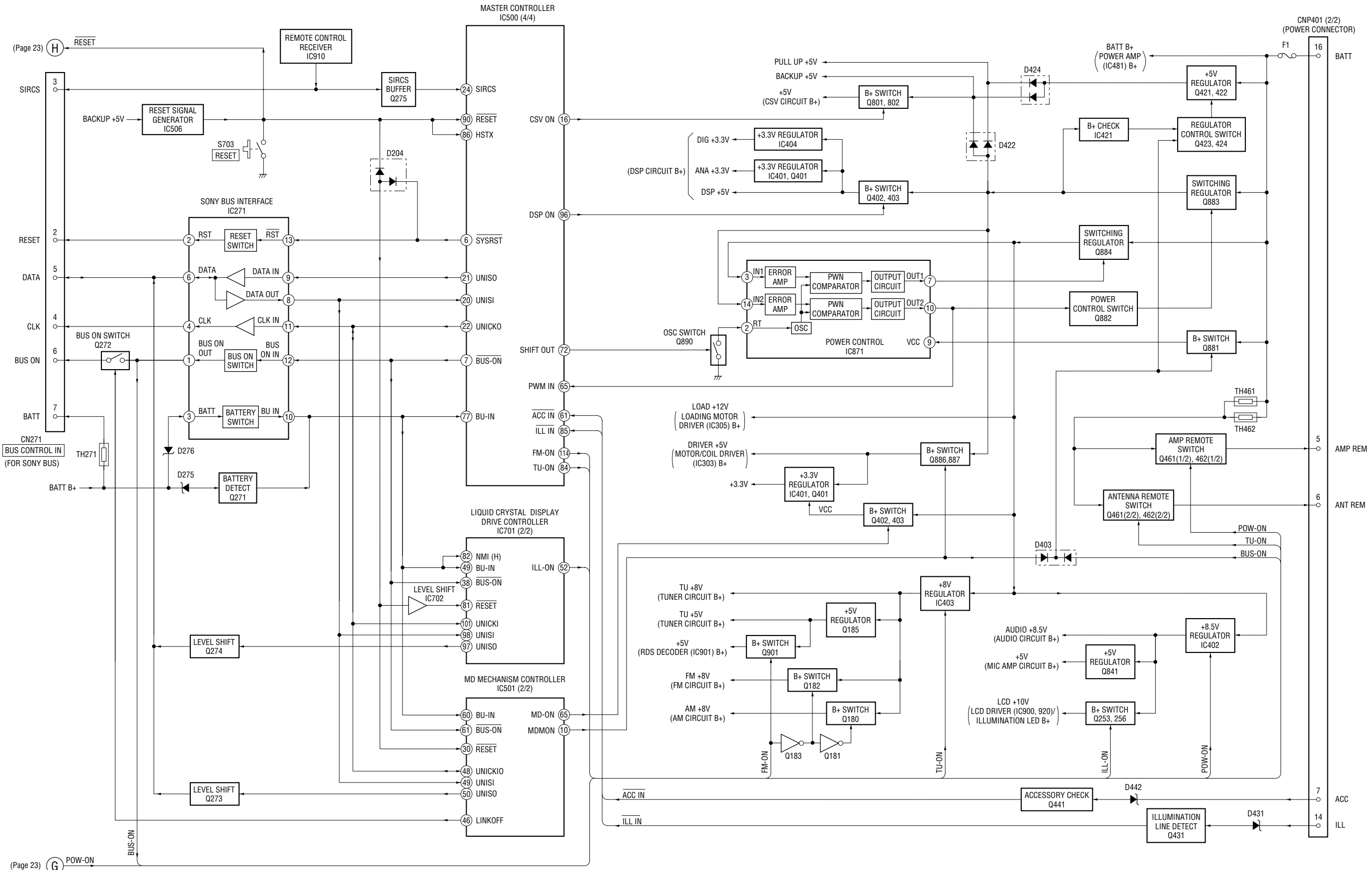
5-3. BLOCK DIAGRAM – MAIN Section –



5-4. BLOCK DIAGRAM – DISPLAY/KEY CONTROL Section –



5-5. BLOCK DIAGRAM – BUS CONTROL/POWER SUPPLY Section –



5-6. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS
(In addition to this, the necessary note is printed in each block)

Note on Printed Wiring Boards:

- : parts extracted from the component side.
 - : parts extracted from the conductor side.
 - : Through hole.
 - △ : internal component.
 - ▨ : Pattern from the side which enables seeing.
(The other layers' patterns are not indicated.)
- Caution:

Pattern face side:	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side:	Parts on the parts face side seen from the parts face are indicated.

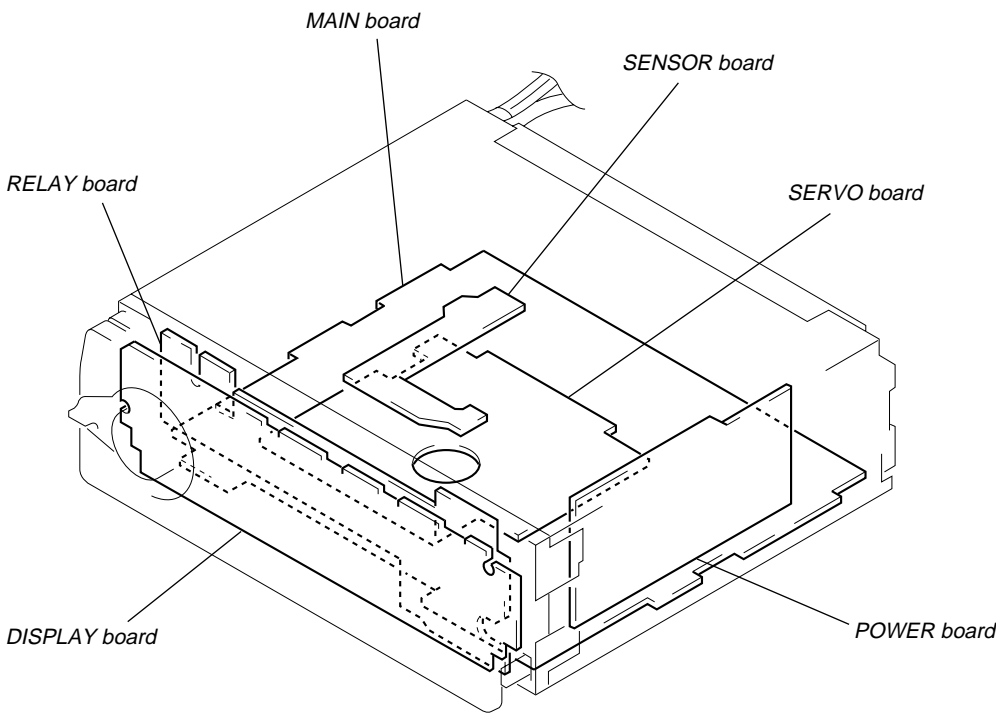
Note on Schematic Diagram:

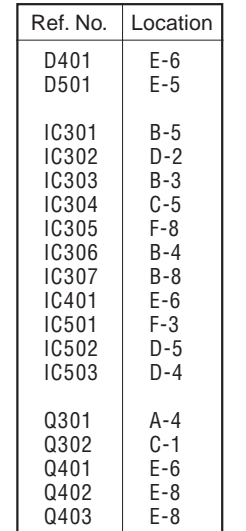
- All capacitors are in μF unless otherwise noted. pF : μpF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}W$ or less unless otherwise specified.
- △ : internal component.
- : panel designation.

Note: The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

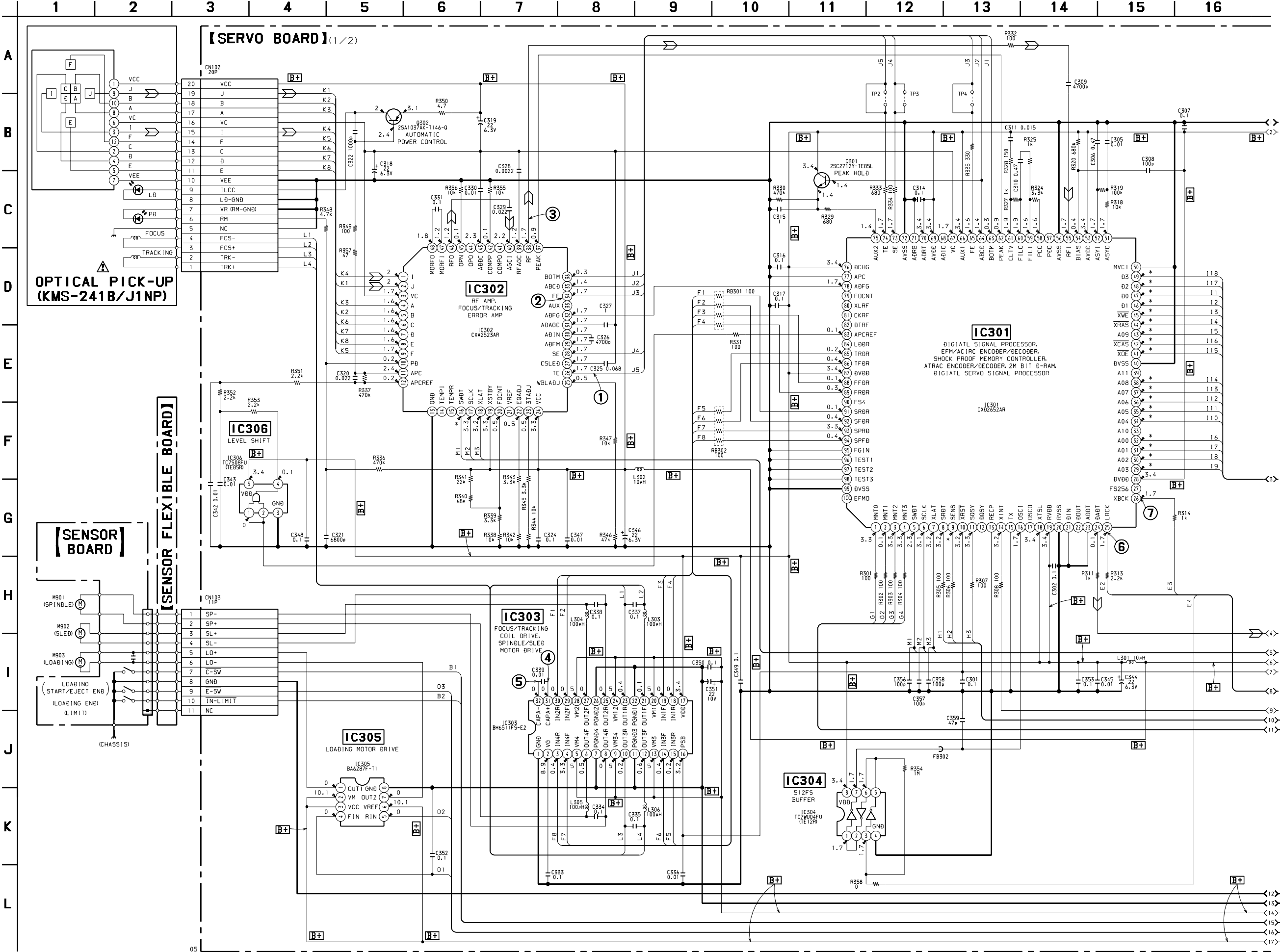
- : B+ Line.
- : adjustment for repair.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 - ⇒ : FM
 - ⇒ : MW/LW
 - Σ : MD
- Abbreviation
 - TYPE A : ENGLISH, SPANISH
 - TYPE B : ENGLISH, GERMAN
 - TYPE C : ENGLISH, FRENCH

• Circuit Boards Location





5-8. SCHEMATIC DIAGRAM – SERVO (1/2)/SENSOR Boards – • See page 37 for Waveforms. • See page 44 for IC Block Diagrams.

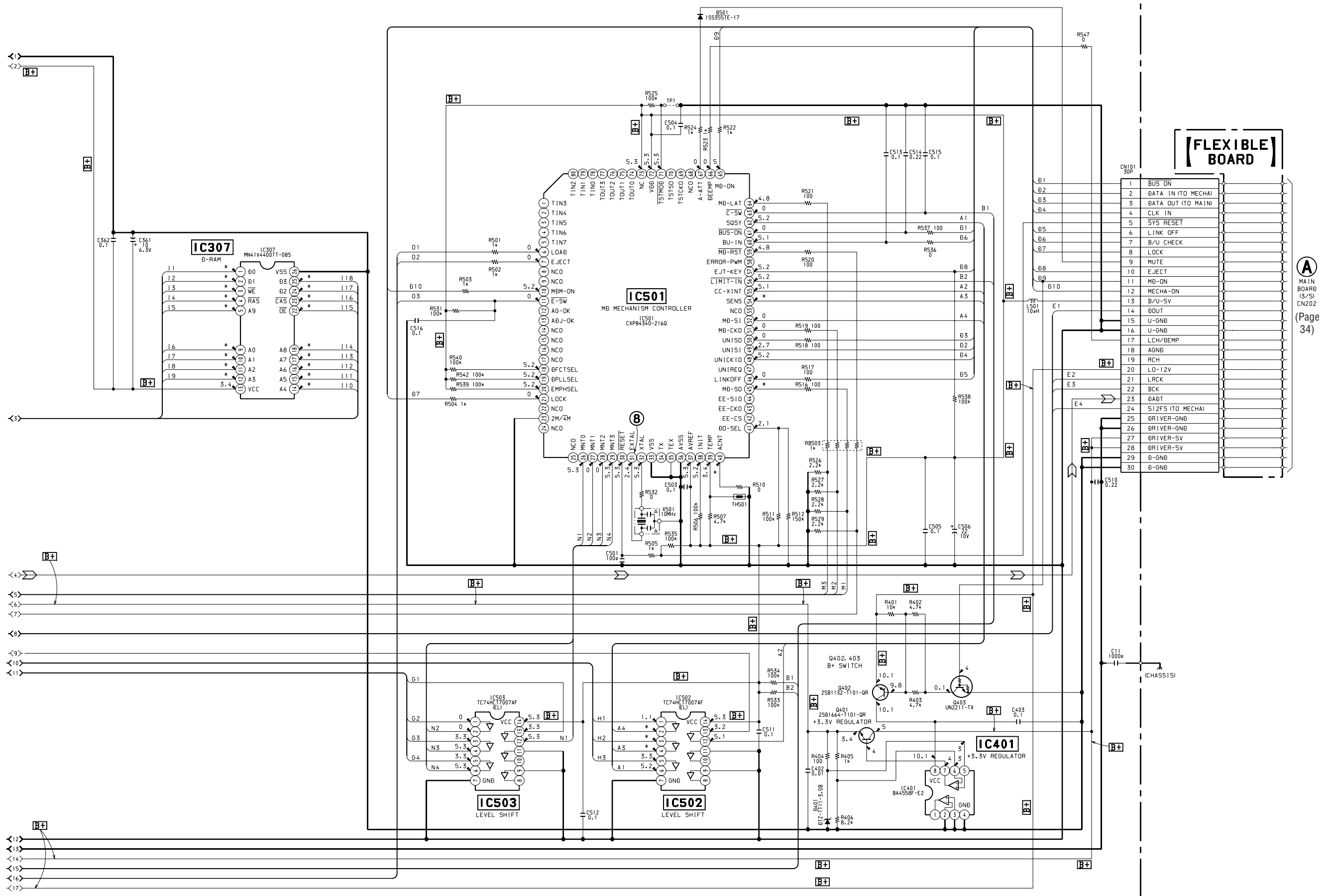


Note on Schematic Diagram:

- Voltages and waveforms are dc with respect to ground in playback mode.
- no mark : MD
- * : Impossible to measure

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

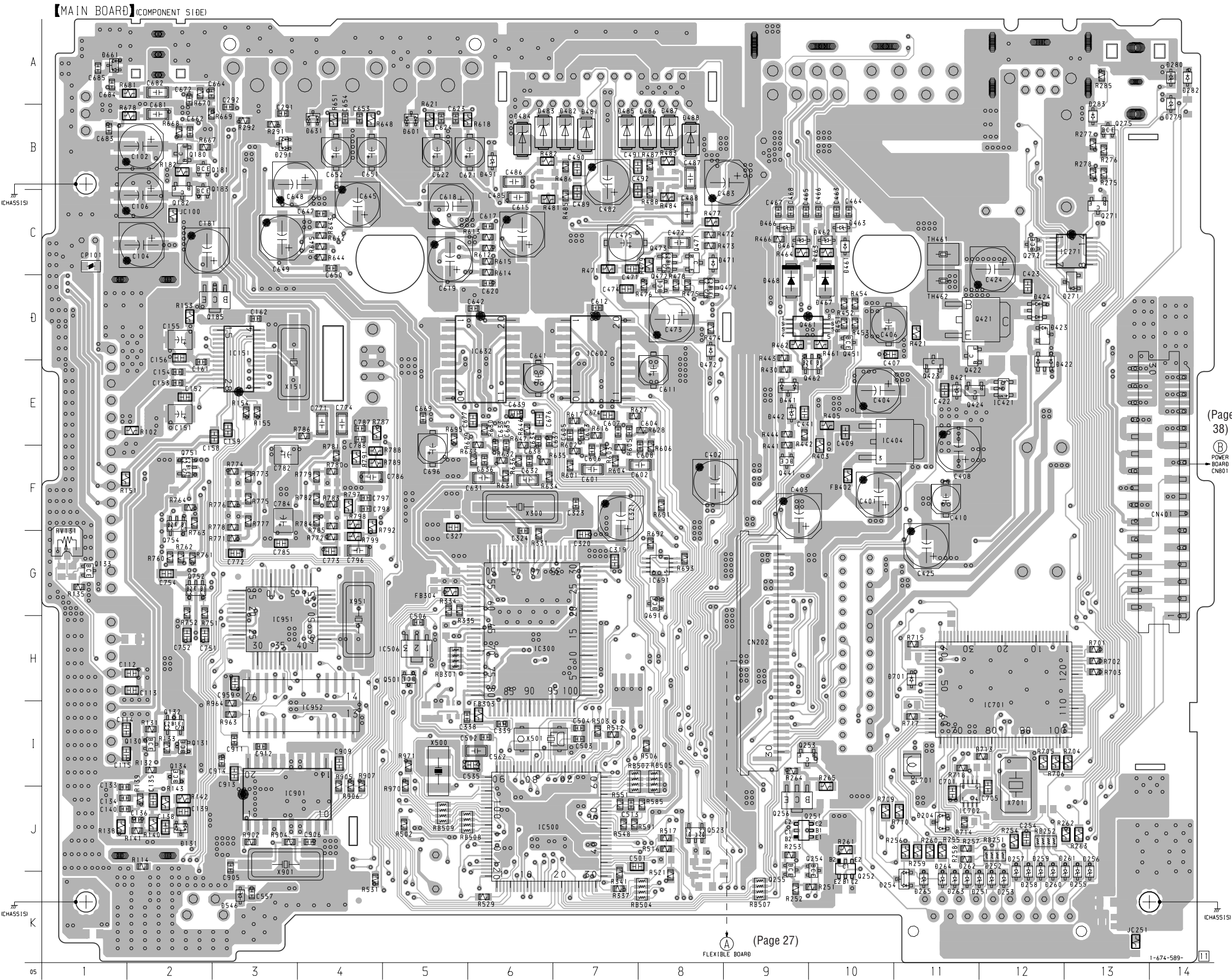
【SERVO BOARD】(2/2)



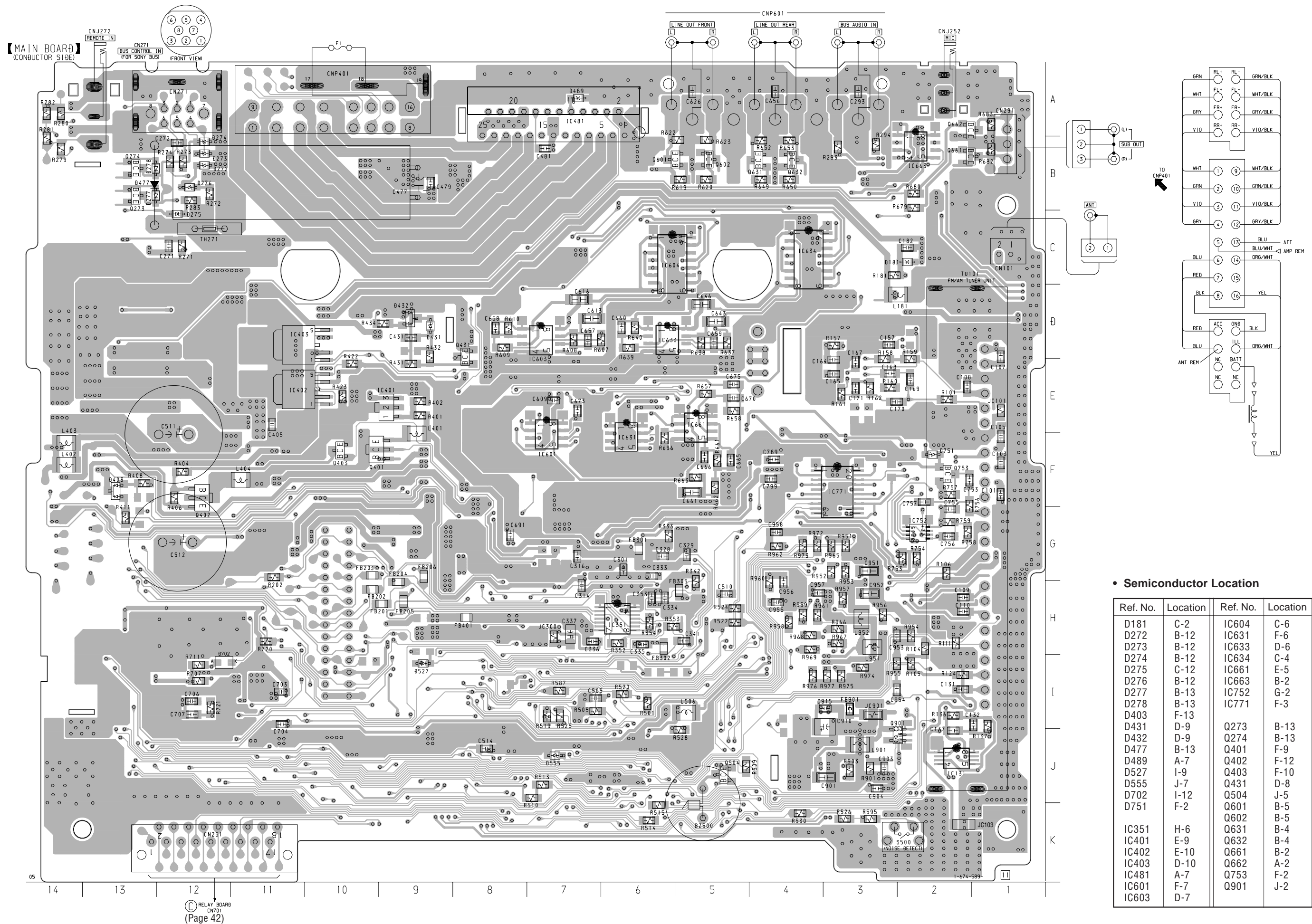
5-10. PRINTED WIRING BOARD – MAIN Board (Component Side) – • See page 26 for Circuit Boards Location.

• Semiconductor Location

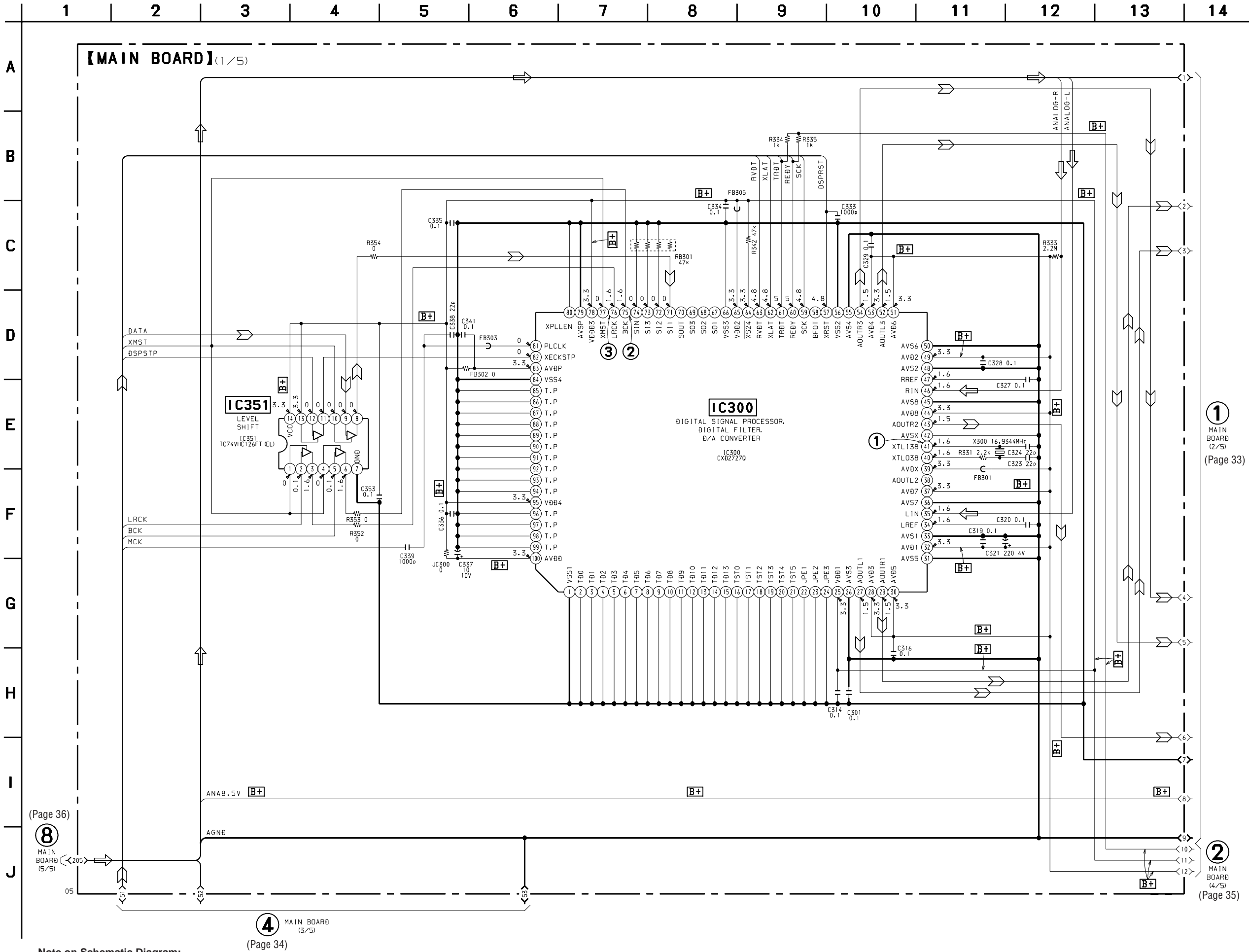
Ref. No.	Location	Ref. No.	Location
D131	J-2	IC271	C-13
D204	J-11	IC300	H-6
D251	K-12	IC404	E-10
D252	K-12	IC421	E12
D253	K-12	IC500	J-6
D254	K-11	IC506	H-5
D255	K-13	IC602	D-7
D256	K-13	IC632	D-6
D257	K-12	IC691	G-8
D258	K-12	IC701	H-12
D259	K-12	IC702	J-11
D260	K-12	IC901	J-3
D261	K-13	IC951	H-3
D262	K-11	IC952	I-3
D263	K-11		
D264	K-11	Q130	I-2
D265	K-11	Q131	I-2
D271	D-13	Q132	I-2
D279	B-14	Q133	G-1
D280	A-14	Q134	I-2
D282	A-14	Q180	B-2
D283	B-13	Q181	B-2
D291	B-13	Q182	C-2
D421	E-11	Q183	C-2
D422	E-12	Q185	D-3
D423	D-12	Q251	J-9
D424	D-12	Q252	J-10
D441	E-9	Q253	I-9
D442	E-9	Q254	J-10
D461	C-10	Q255	J-9
D462	C-10	Q256	J-9
D463	C-10	Q271	C-13
D464	C-9	Q272	C-12
D466	C-9	Q275	B-13
D471	C-8	Q421	D-11
D472	D-8	Q422	D-11
D481	B-7	Q423	E-11
D482	B-7	Q424	E-11
D483	B-6	Q441	F-9
D484	B-6	Q451	D-10
D485	B-7	Q461	D-9
D486	B-8	Q462	E-10
D487	B-8	Q471	C-8
D488	B-8	Q472	D-8
D491	B-6	Q473	C-8
D546	K-3	Q474	D-8
D601	B-5	Q501	H-5
D631	B-4	Q523	J-8
D661	A-1	Q691	G-8
D701	H-11	Q751	F-2
		Q752	G-2
IC151	E-3	Q754	F-2



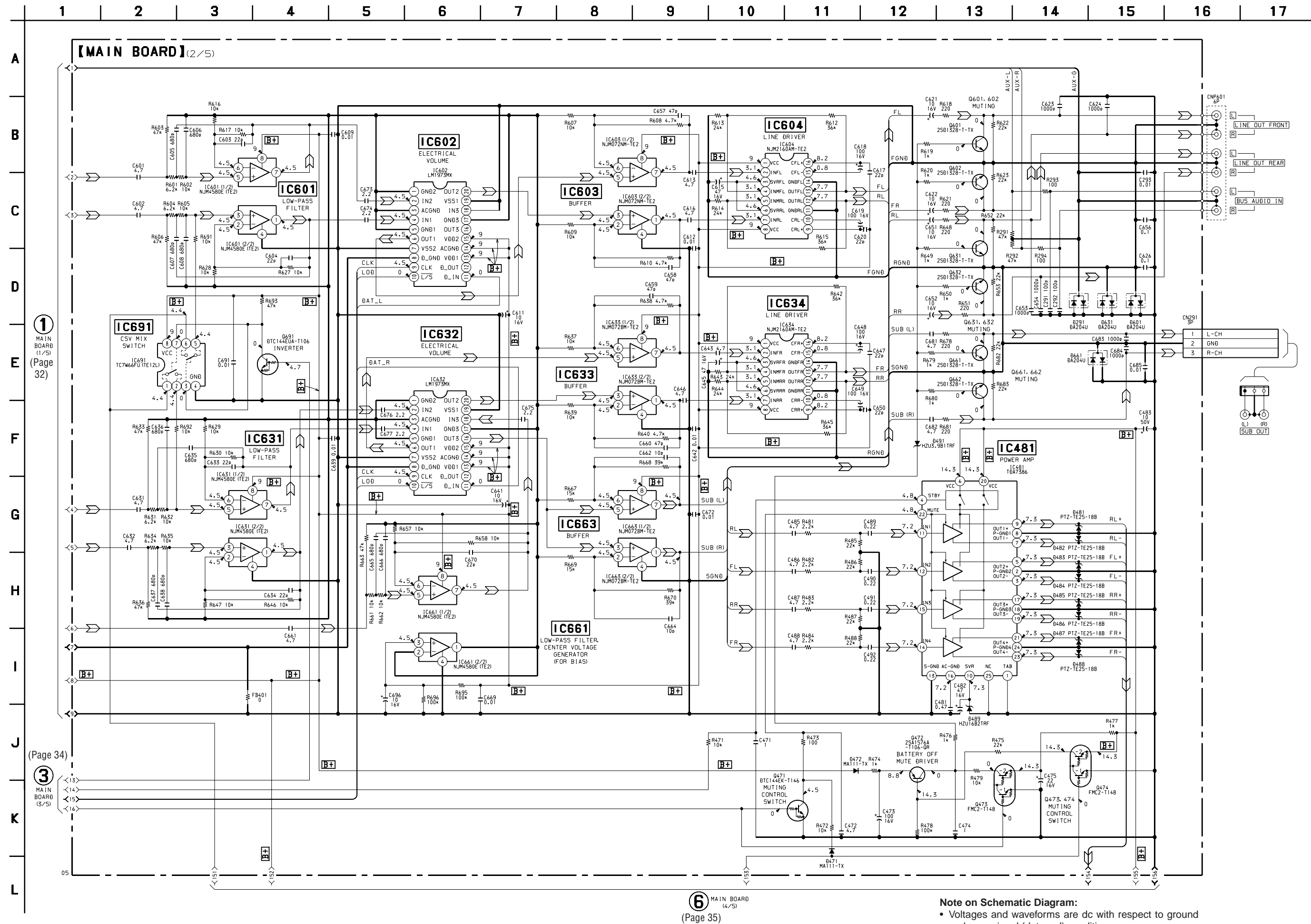
5-11. PRINTED WIRING BOARD – MAIN Board (Conductor Side) – • See page 26 for Circuit Boards Location.

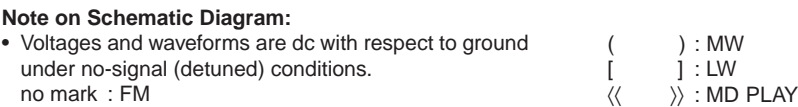


5-12. SCHEMATIC DIAGRAM – MAIN Board (1/5) – • See page 37 for Waveforms. • See page 48 for IC Block Diagrams.

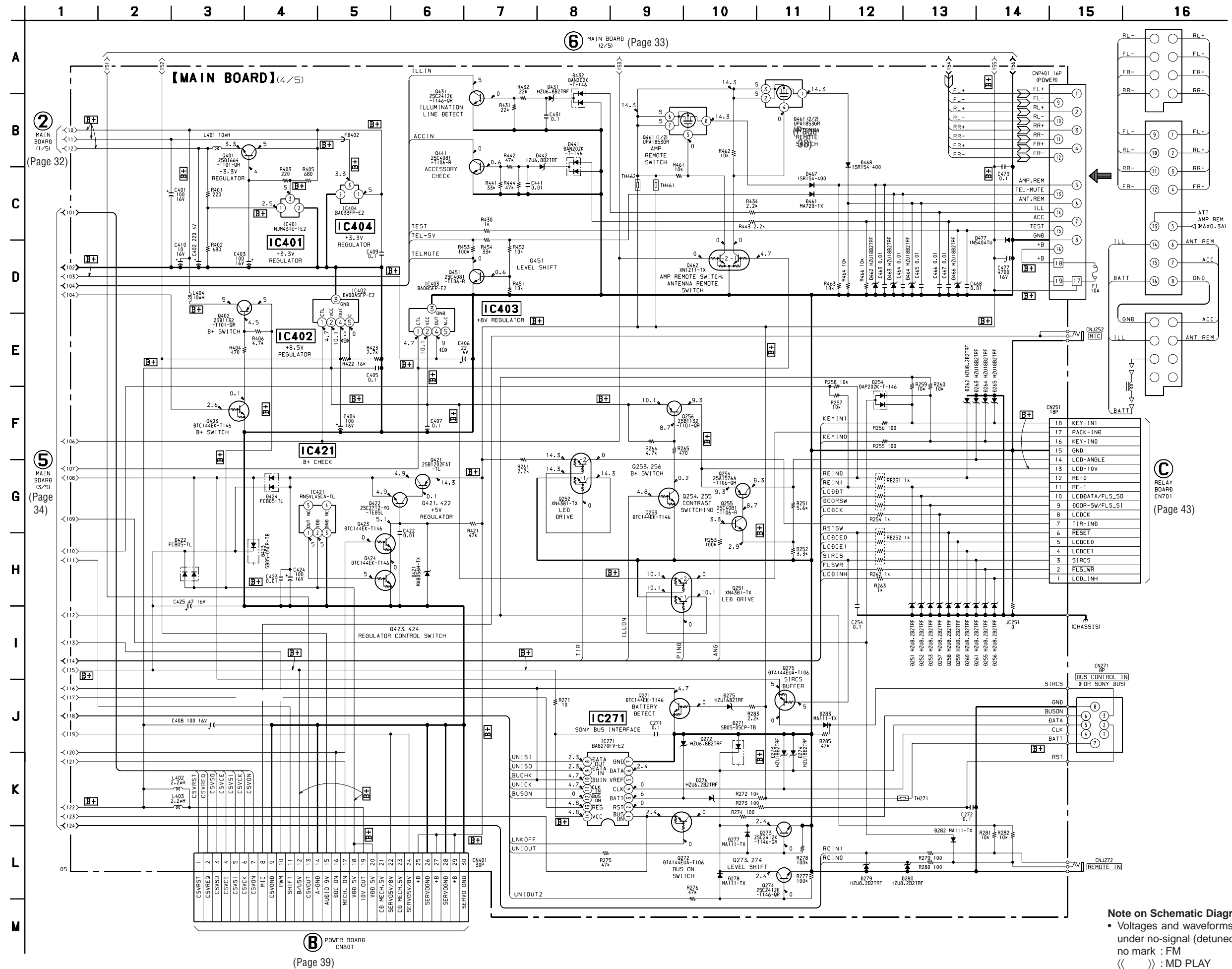


5-13. SCHEMATIC DIAGRAM – MAIN Board (2/5) – • See page 47 for IC Block Diagrams.

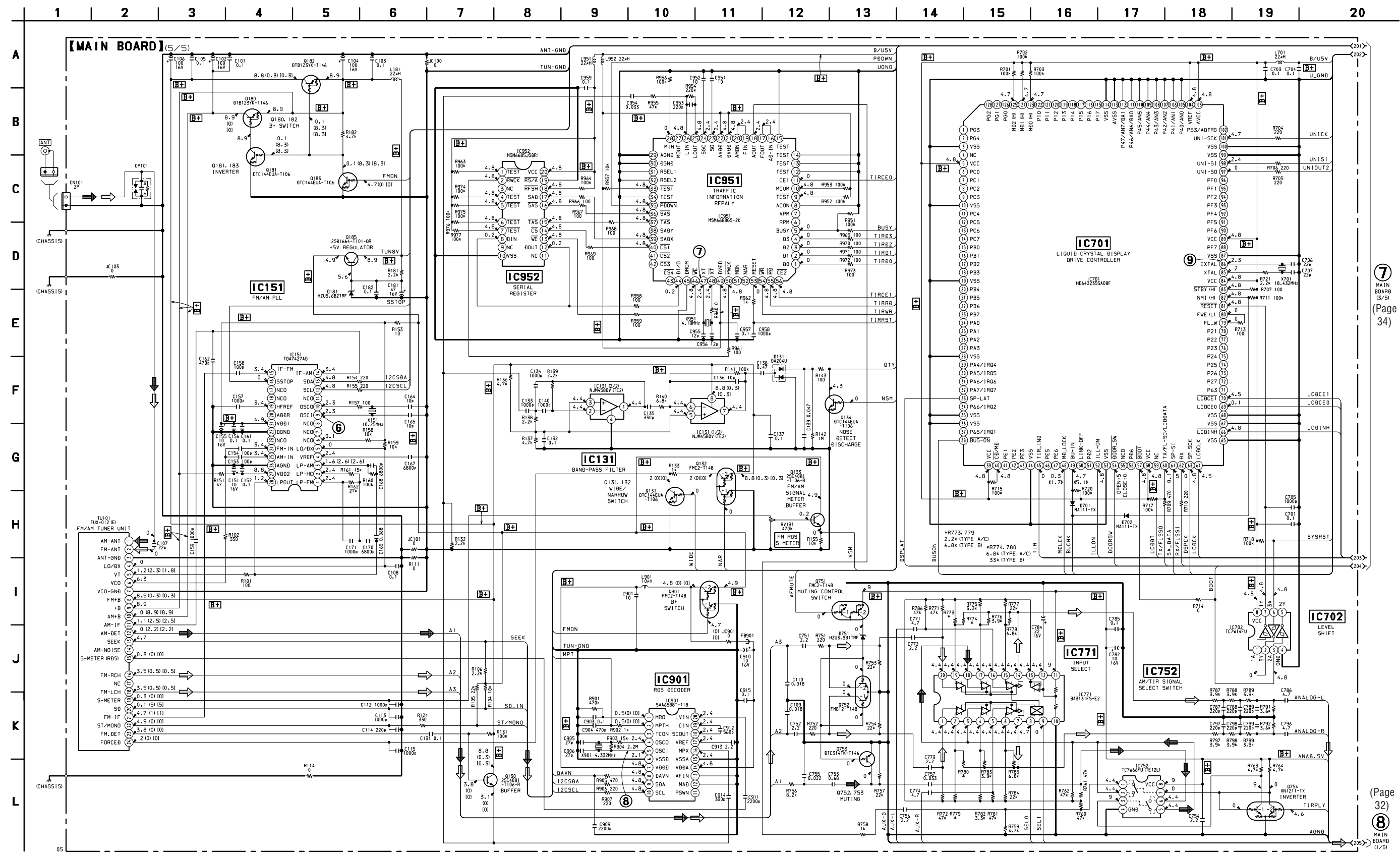




5-15. SCHEMATIC DIAGRAM – MAIN Board (4/5) – • See page 47 for IC Block Diagrams.



5-16. SCHEMATIC DIAGRAM – MAIN Board (5/5) – • See page 37 for Waveforms. • See page 47 for IC Block Diagrams.

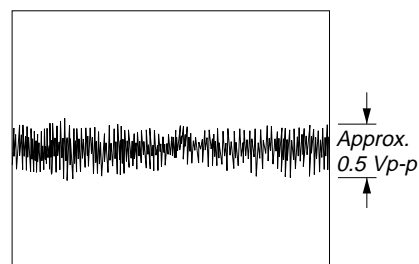


Note on Schematic Diagram:

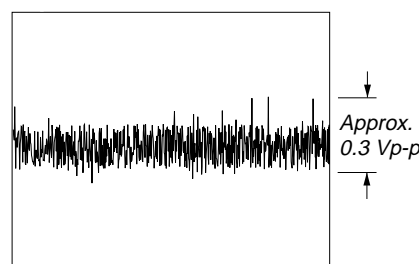
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM
- () : MW
- [] : LW
- << >> : MD PLAY

• Waveforms
– SERVO Board –

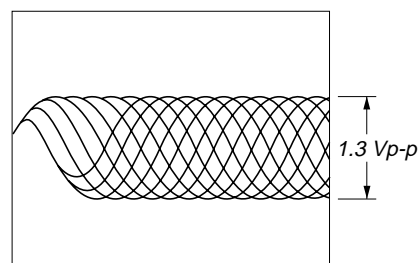
① IC302 ②⑥ (TE) (MD PLAY)



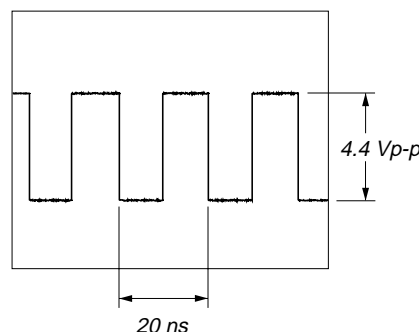
② IC302 ③④ (FE) (MD PLAY)



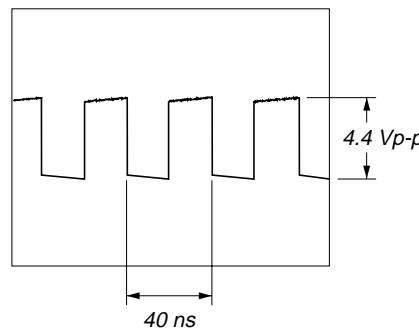
③ IC302 ③⑧ (RF) (MD PLAY)



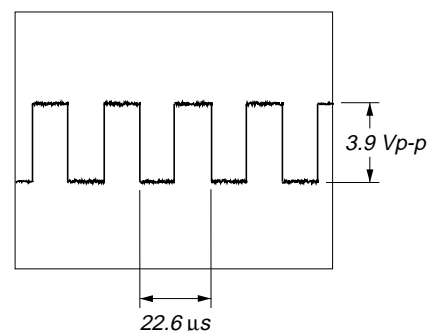
④ IC303 ③① (CAPA+) (MD PLAY)



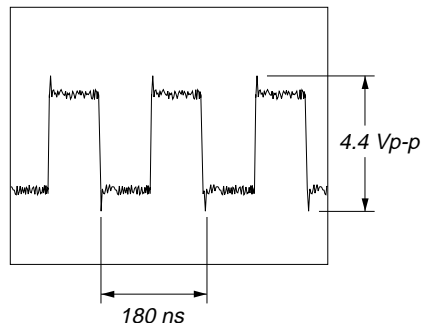
⑤ IC303 ③② (CAPA-) (MD PLAY)



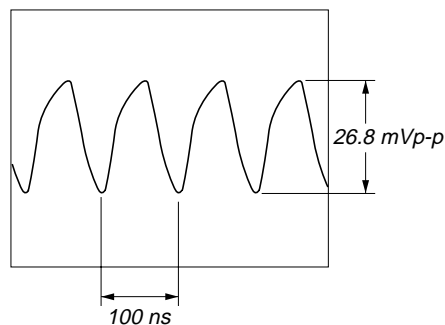
⑥ IC301 ②⑤ (LRCK) (MD PLAY)



⑦ IC301 ②⑥ (XBCK) (MD PLAY)

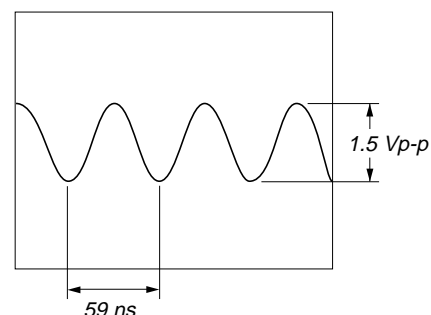


⑧ IC501 ③① (EXTAL) (MD PLAY)

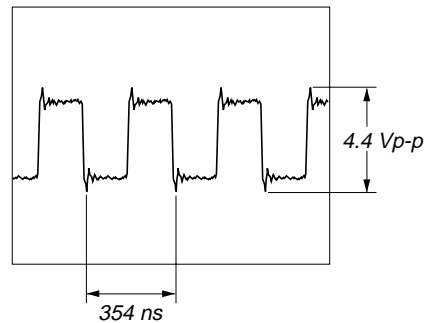


– MAIN Board –

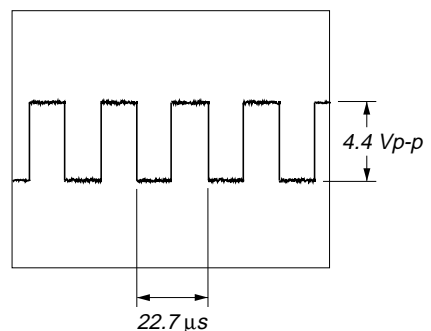
① IC300 ④① (XTLI38)



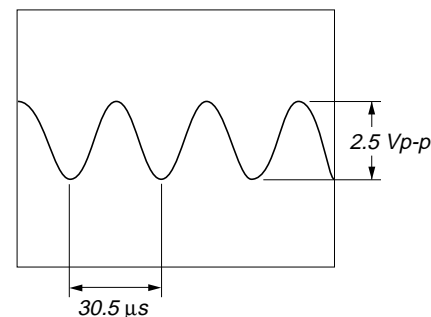
② IC300 ⑦⑤ (BCK)



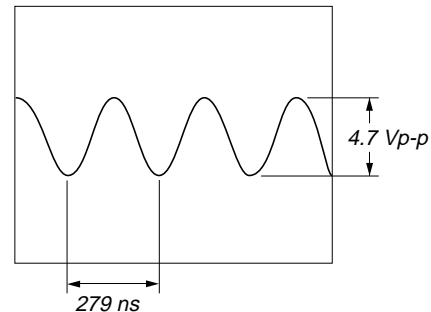
③ IC300 ⑦⑥ (LRCK)



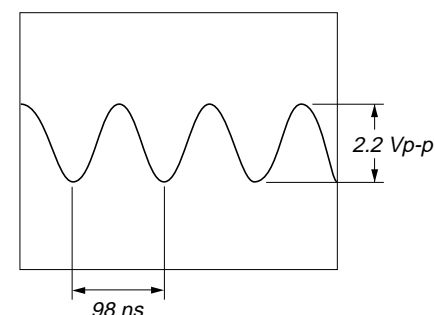
④ IC500 ⑦④ (X0A)



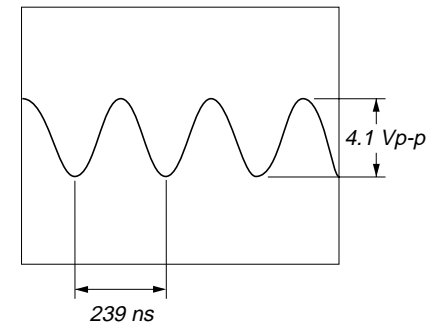
⑤ IC500 ⑧② (X0)



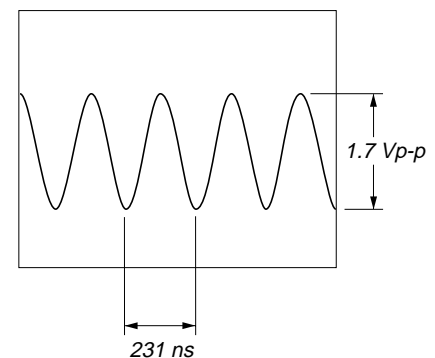
⑥ IC151 ⑨ (OSCI)



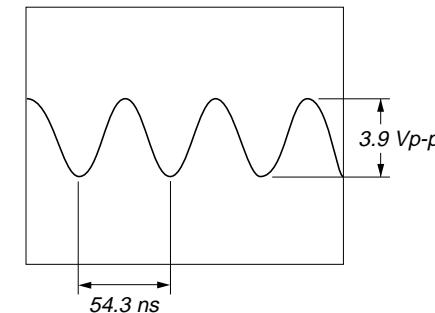
⑦ IC951 ④⑦ (XT)



⑧ IC901 ⑤ (OSC1)

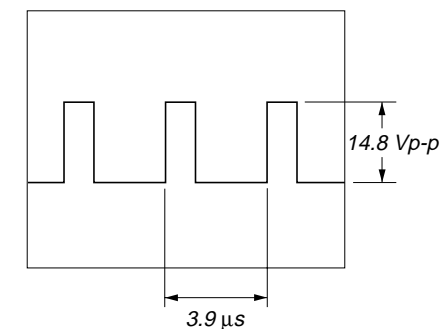


⑨ IC701 ⑧⑥ (EXTAL)

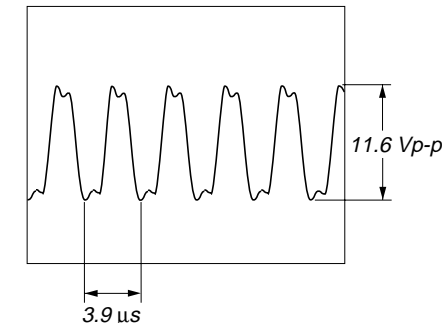


– POWER Board –

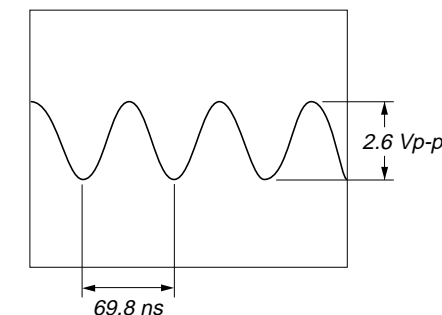
① Q833 ⑤ to ⑧ (D)



② Q883 ④ (GATE)

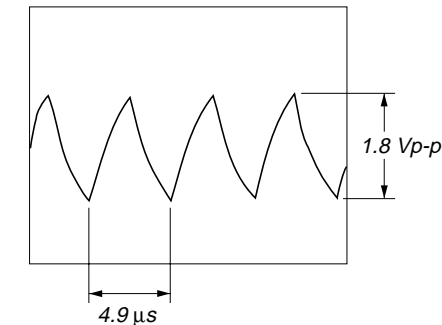


③ IC801 ②⑩ (XI1)

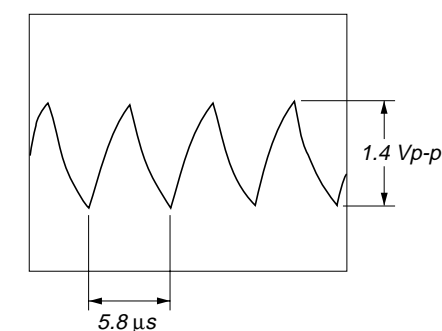


– DISPLAY Board –

① IC900 ②⑩ (OSC-IN)



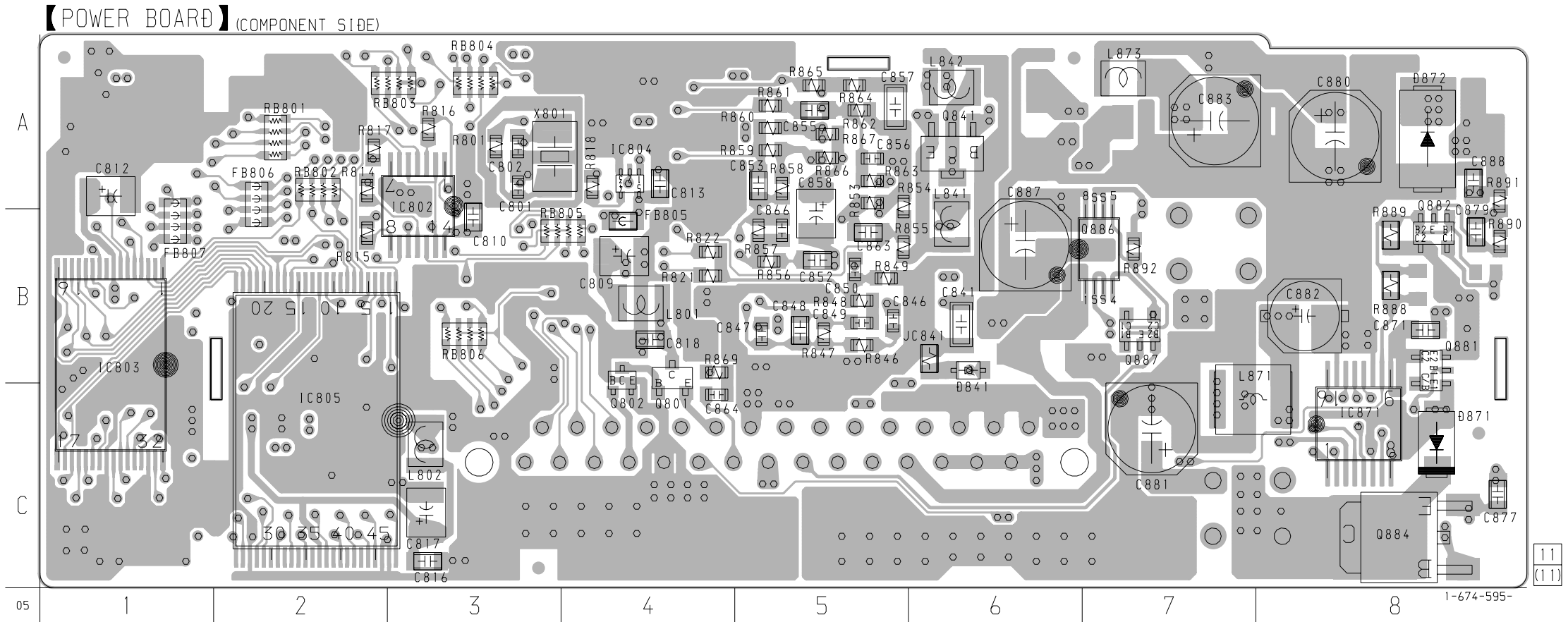
② IC920 ①② (OSC-IN)



5-17. PRINTED WIRING BOARD – POWER Board – • See page 26 for Circuit Boards Location.

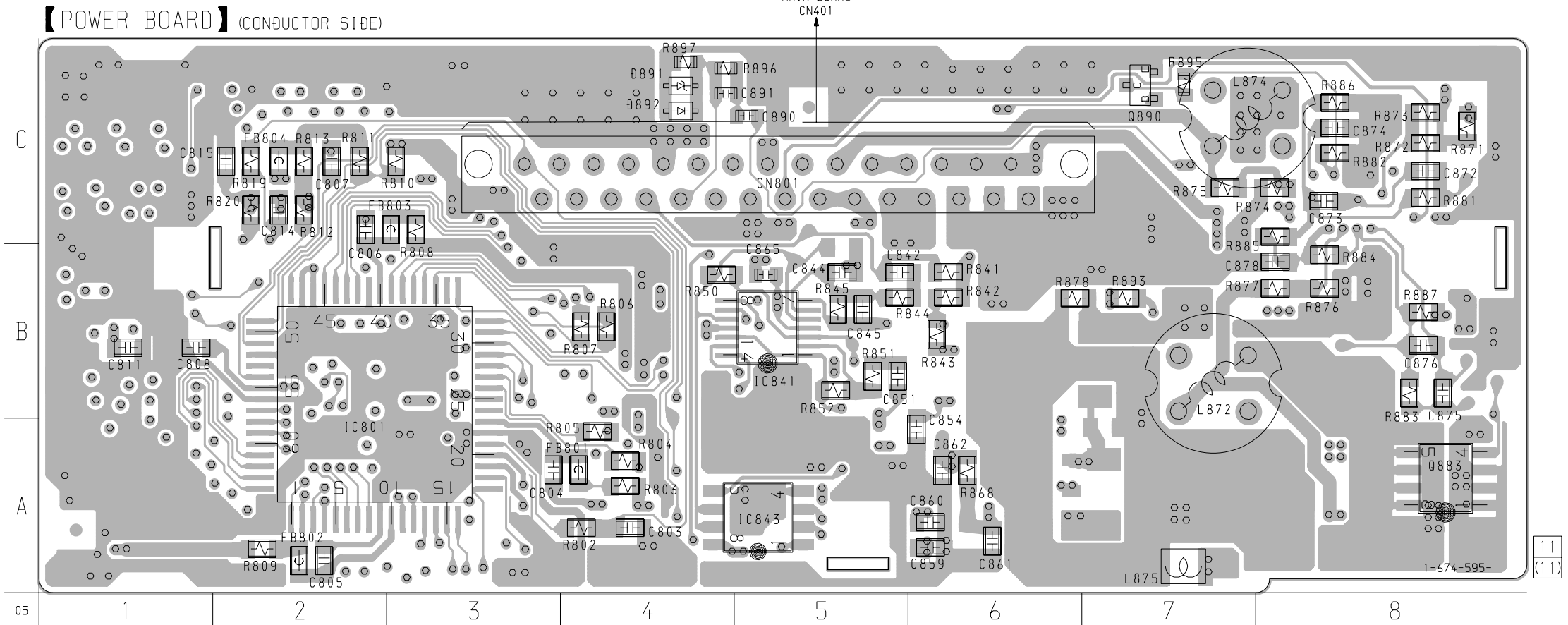
• Semiconductor Location
(Component Side)

Ref. No.	Location
D841	B-6
D871	C-8
D872	A-8
IC802	A-3
IC803	B-1
IC804	A-4
IC805	C-2
IC871	C-8
Q801	B-4
Q802	B-4
Q841	A-6
Q881	B-8
Q882	B-8
Q884	C-8
Q886	B-7
Q887	B-7

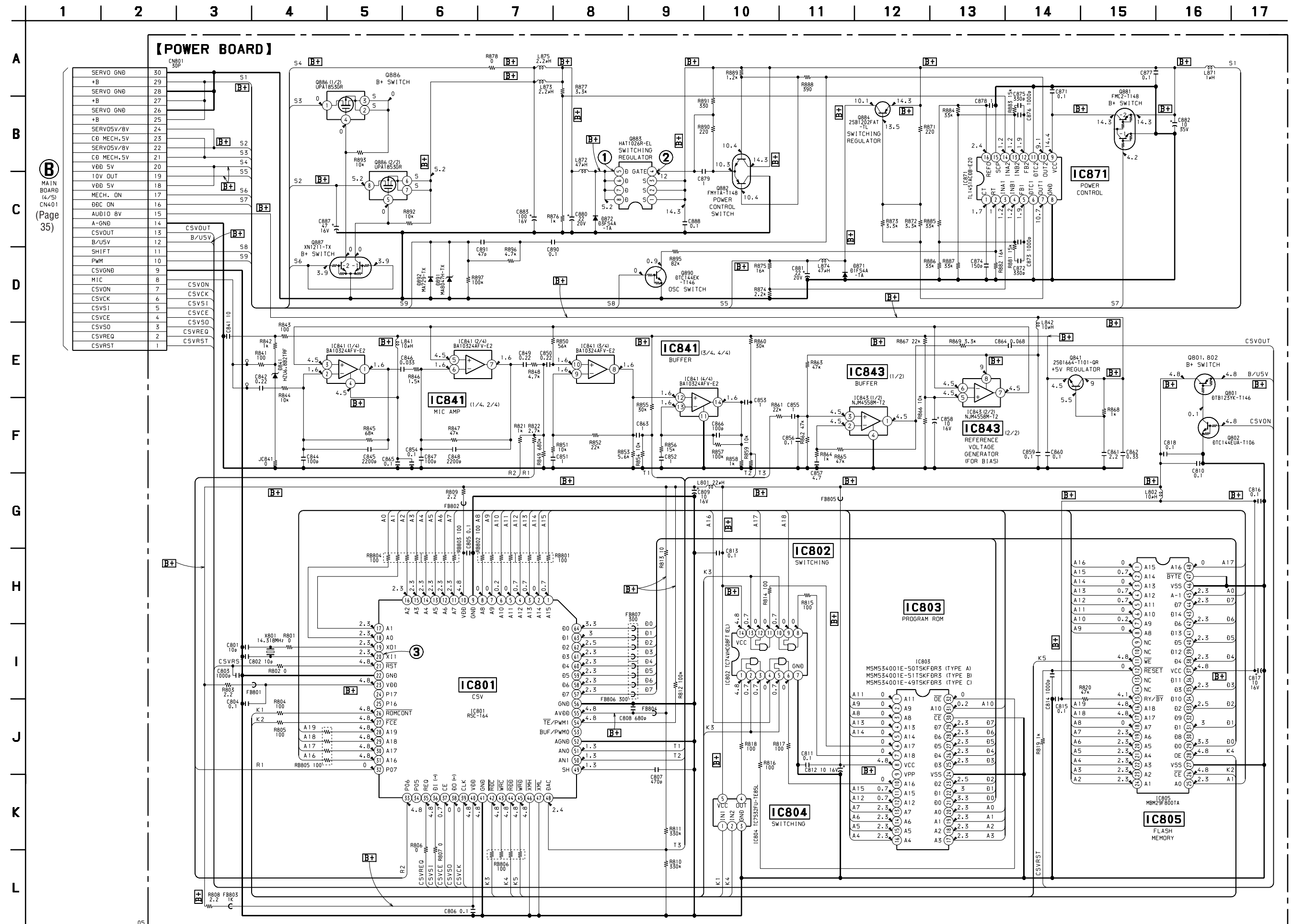


• Semiconductor Location
(Conductor Side)

Ref. No.	Location
D842	A-6
D891	C-4
D892	C-4
IC801	B-2
IC841	B-5
IC843	A-5
Q883	A-8
Q890	C-7



5-18. SCHEMATIC DIAGRAM – POWER Board – • See page 37 for Waveforms. • See page 50 for IC Block Diagrams.

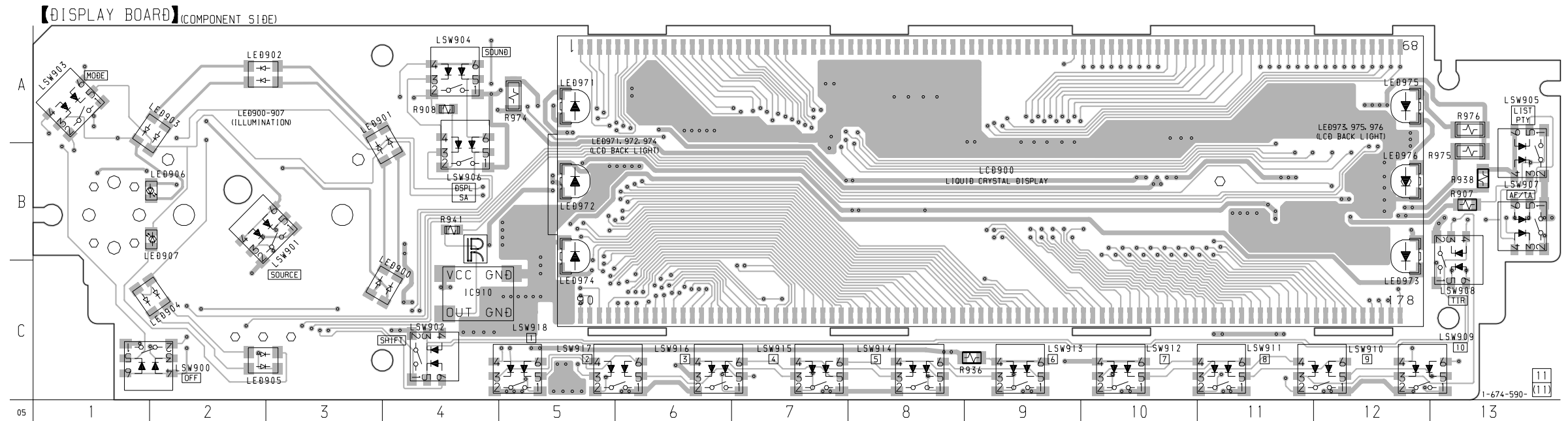
**Note on Schematic Diagram:**

- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM

5-19. PRINTED WIRING BOARD – DISPLAY Board – • See page 26 for Circuit Boards Location.

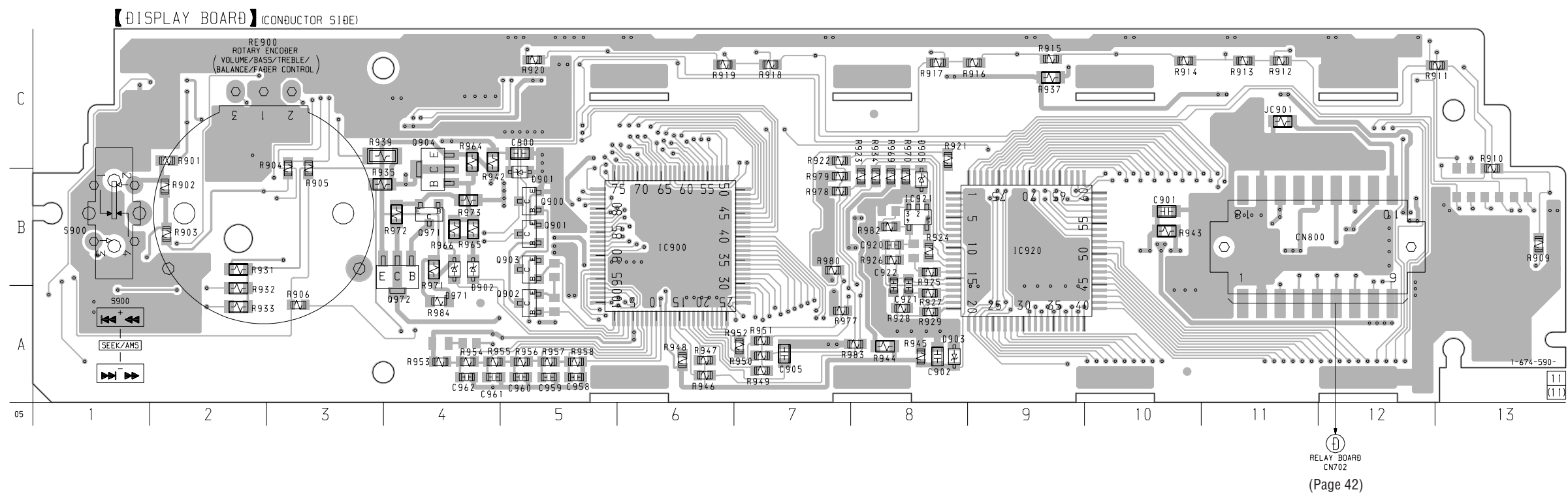
- **Semiconductor Location (Component Side)**

Ref. No.	Location
IC910	C-4
LED900	C-4
LED901	B-4
LED902	A-3
LED903	A-2
LED904	C-2
LED905	C-2
LED906	B-2
LED907	B-2
LED971	A-5
LED972	B-5
LED973	C-12
LED974	C-5
LED975	A-12
LED976	B-12

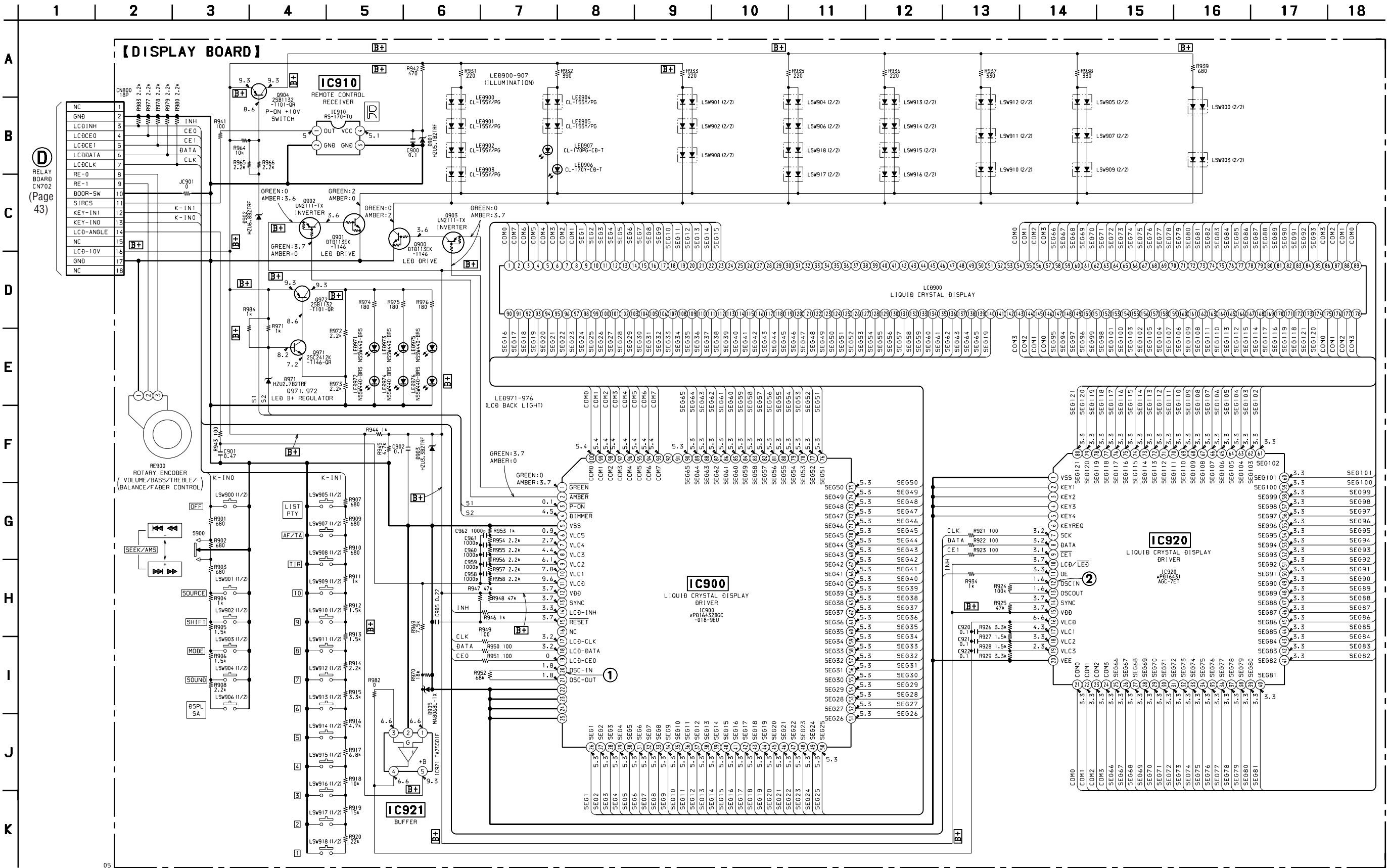


- **Semiconductor Location (Conductor Side)**

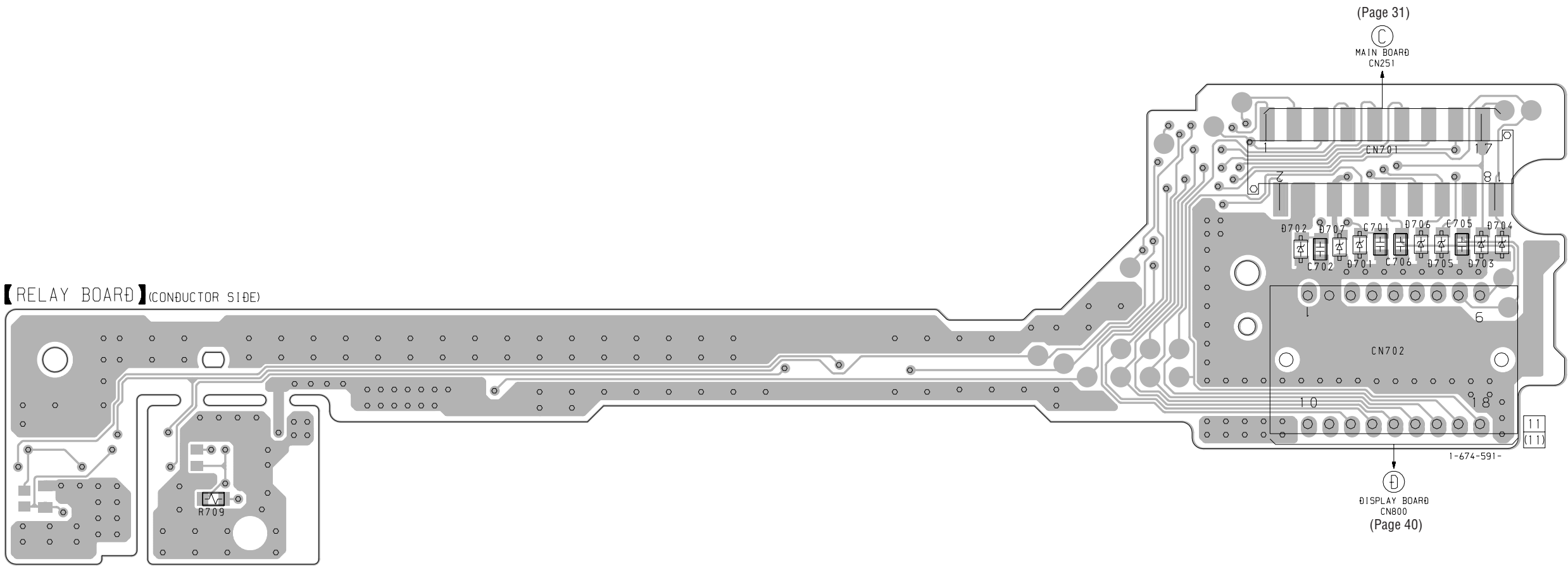
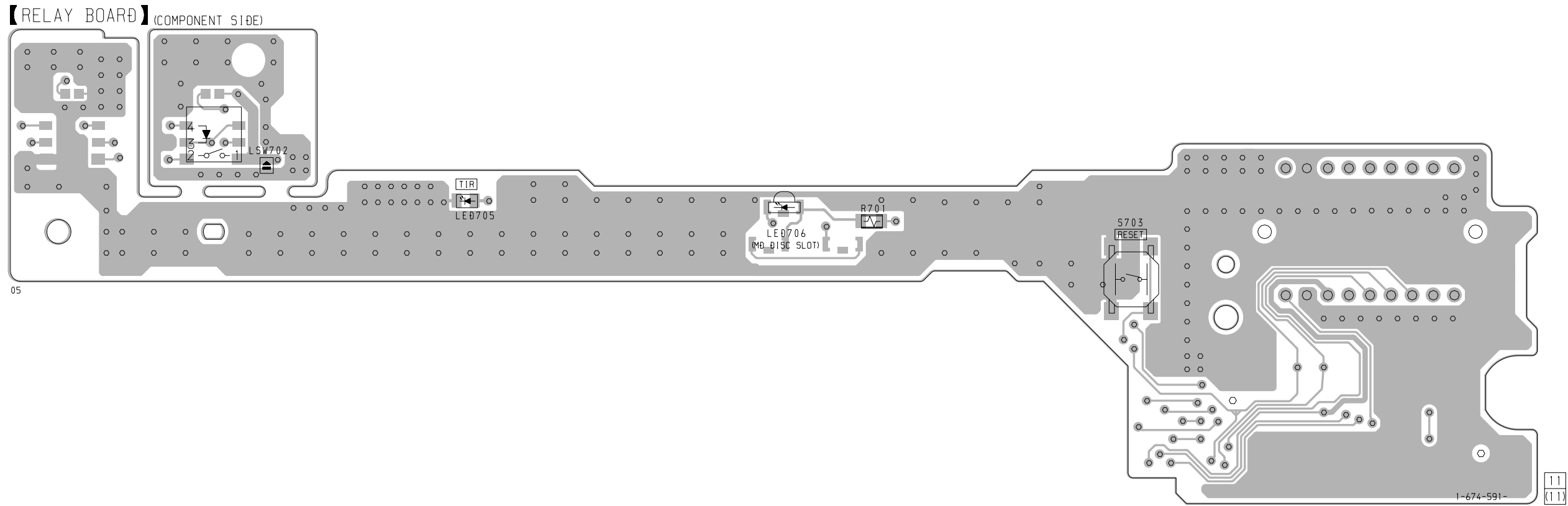
Ref. No.	Location
D901	B-5
D902	B-4
D903	A-8
D905	B-8
D971	B-4
IC900	B-6
IC920	B-9
IC921	B-8
Q900	B-5
Q901	B-5
Q902	A-5
Q903	A-5
Q904	B-4
Q971	B-4
Q972	B-4



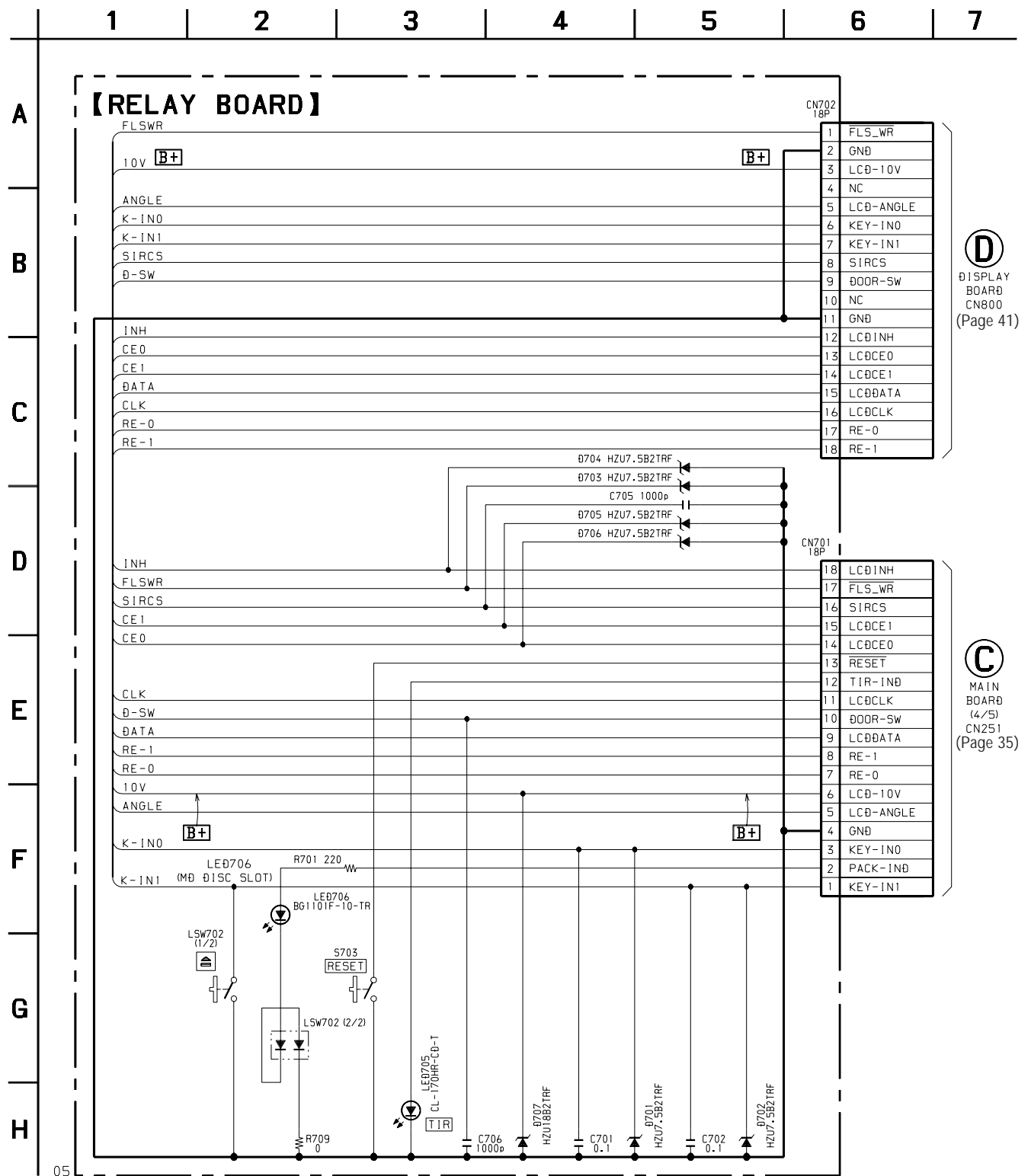
5-20. SCHEMATIC DIAGRAM – DISPLAY Board – • See page 37 for Waveforms.



5-21. PRINTED WIRING BOARD – RELAY Board – • See page 26 for Circuit Boards Location.



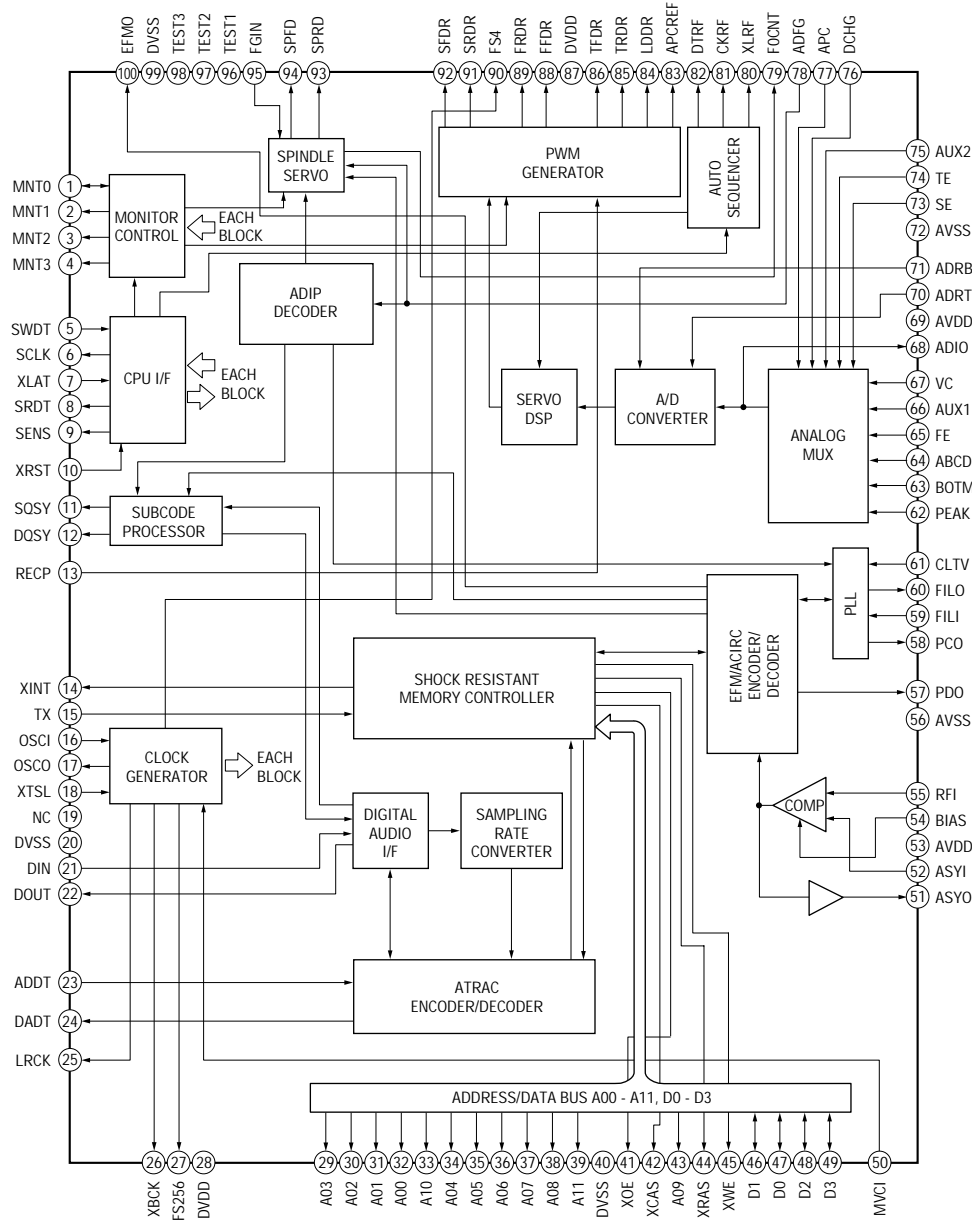
5-22. SCHEMATIC DIAGRAM – RELAY Board –



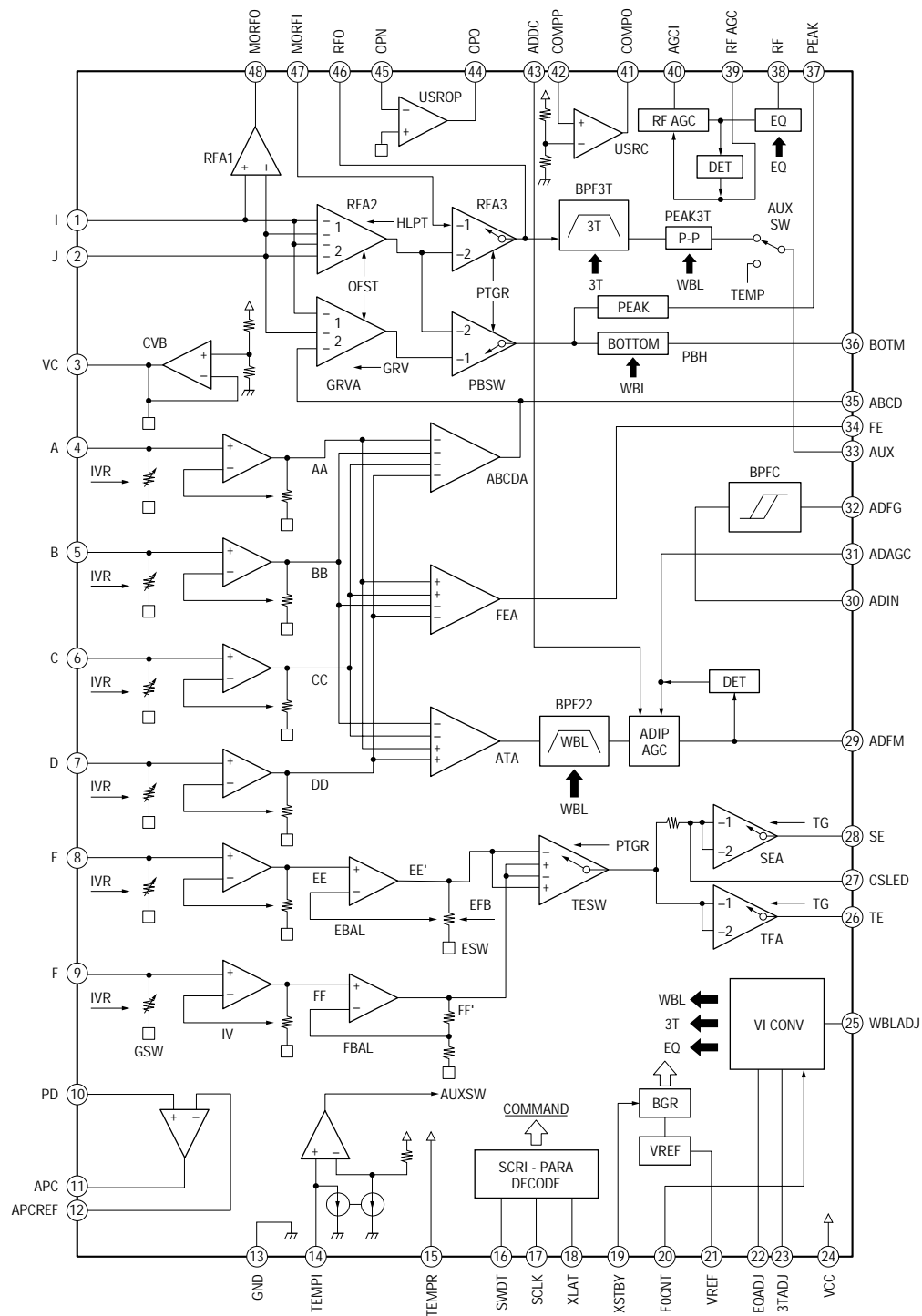
D
DISPLAY
BOARD
CN800
(Page 41)

C
MAIN
BOARD
(4/5)
CN251
(Page 35)

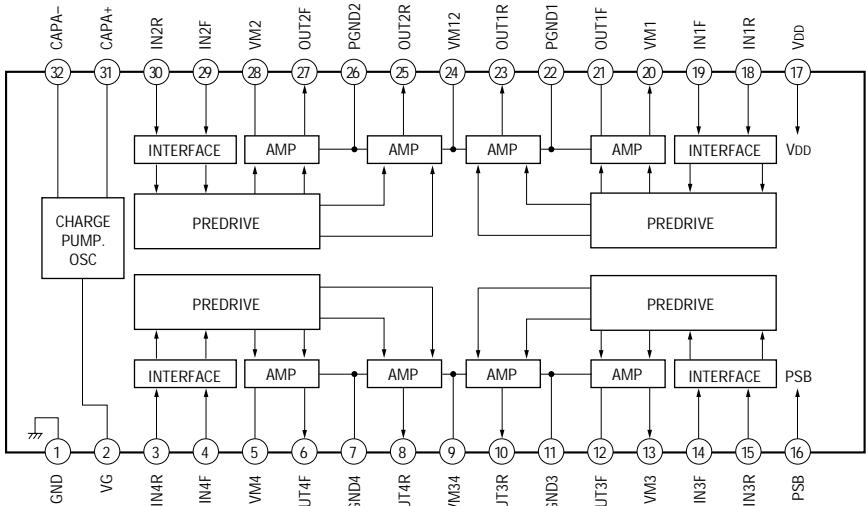
• IC Block Diagrams
– SERVO Board –
IC301 CXD2652AR



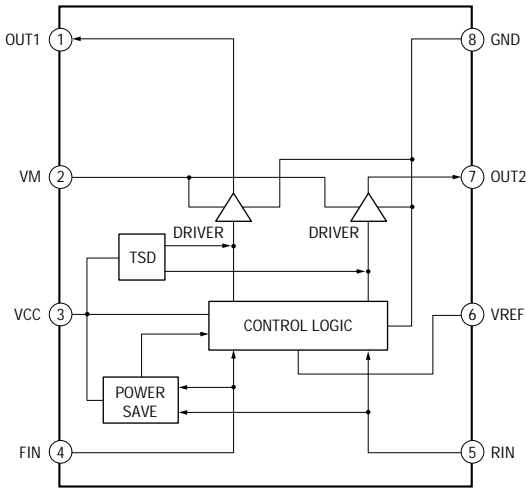
IC302 CXA2523AR



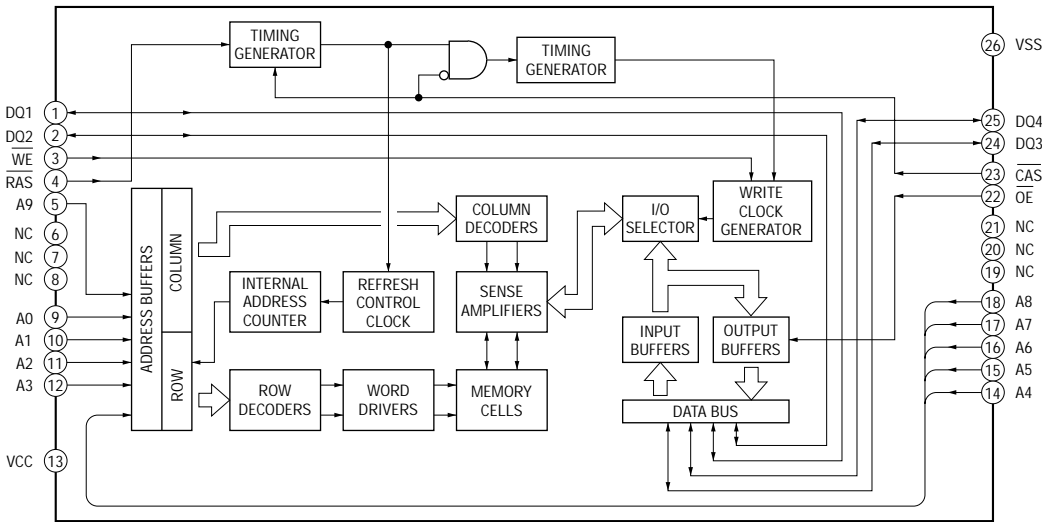
IC303 BH6511FS-E2



IC305 BA6287F-T1

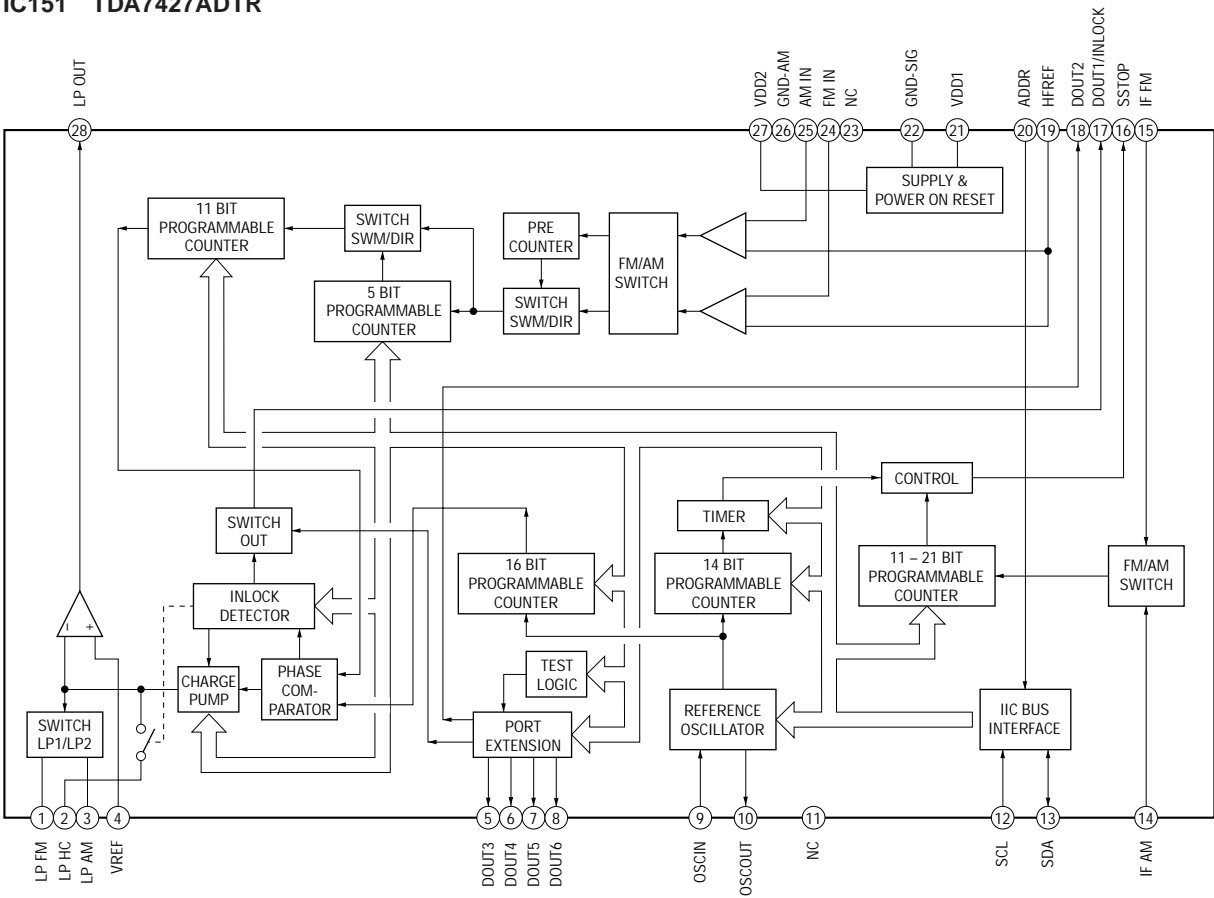


IC307 MN41V4400TT-08S

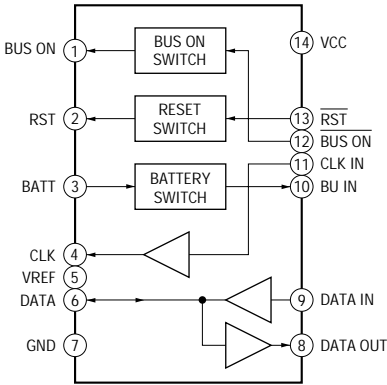


– MAIN Board –

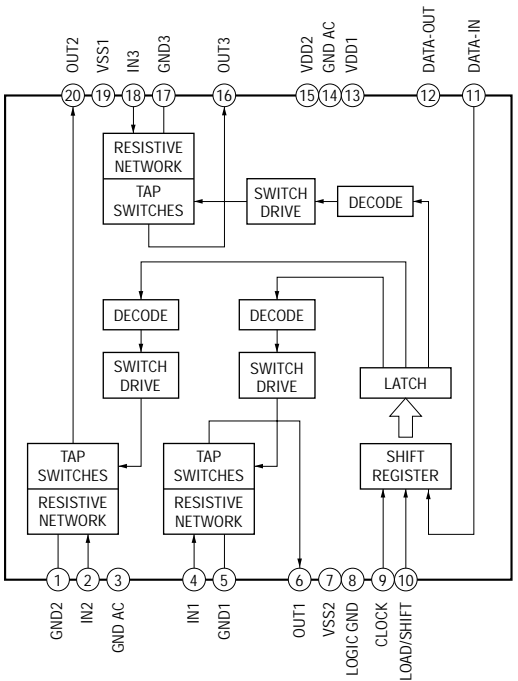
IC151 TDA7427ADTR



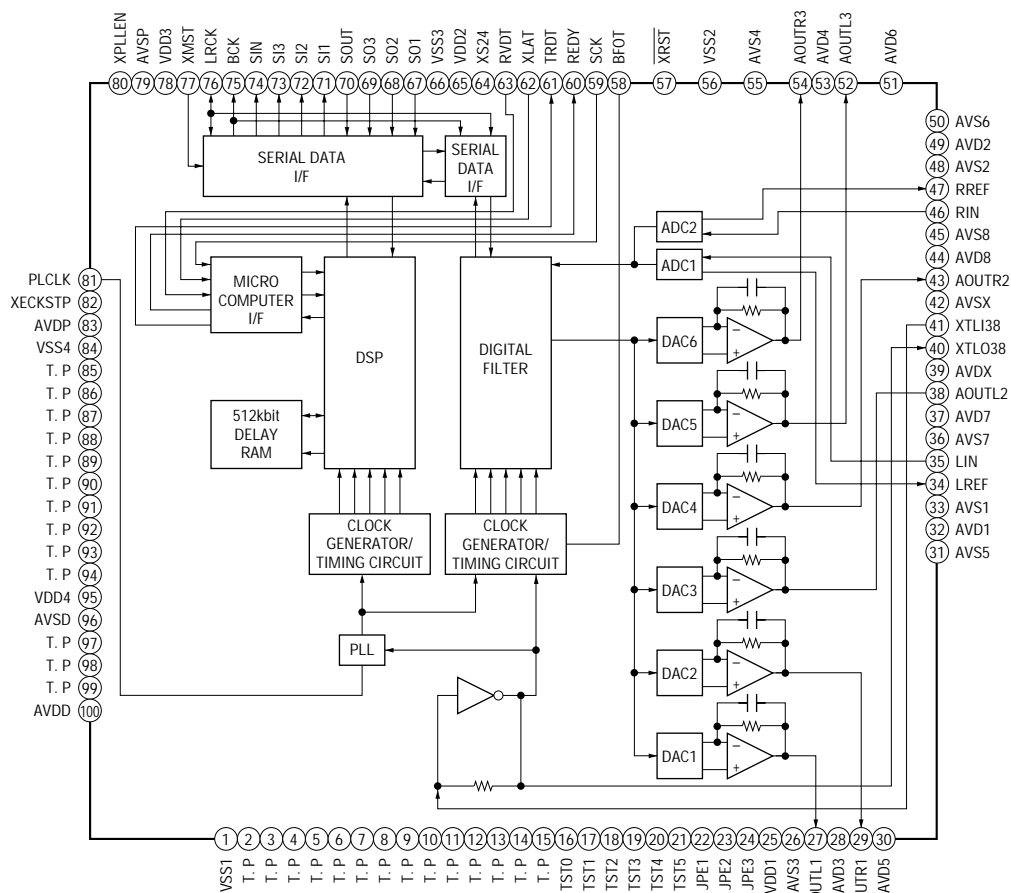
IC271 BA8270FV-E2



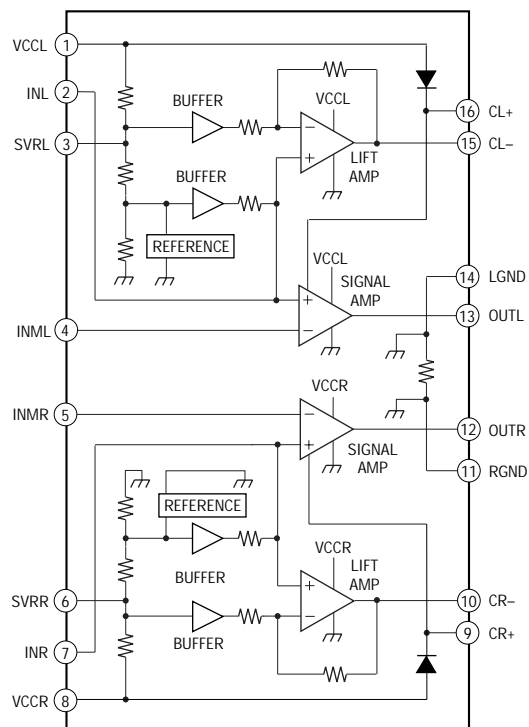
IC602, 632 LM1973MX



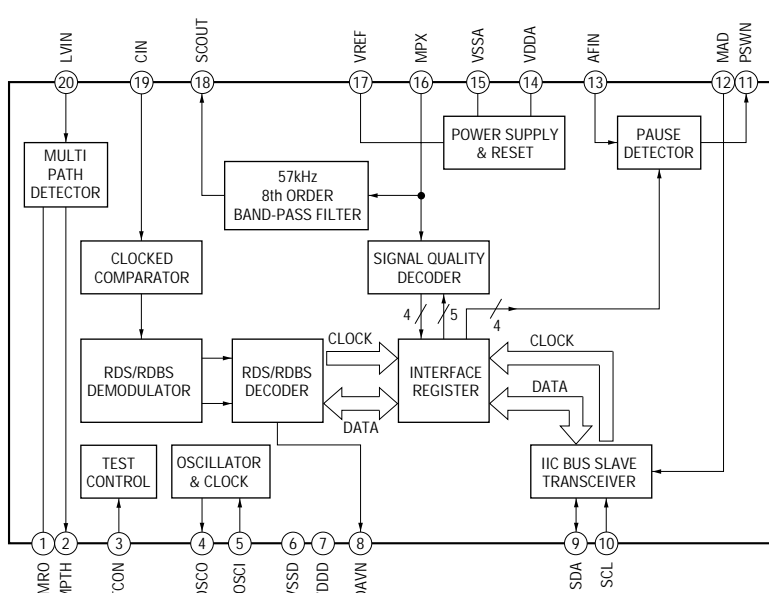
IC300 CXD2727Q



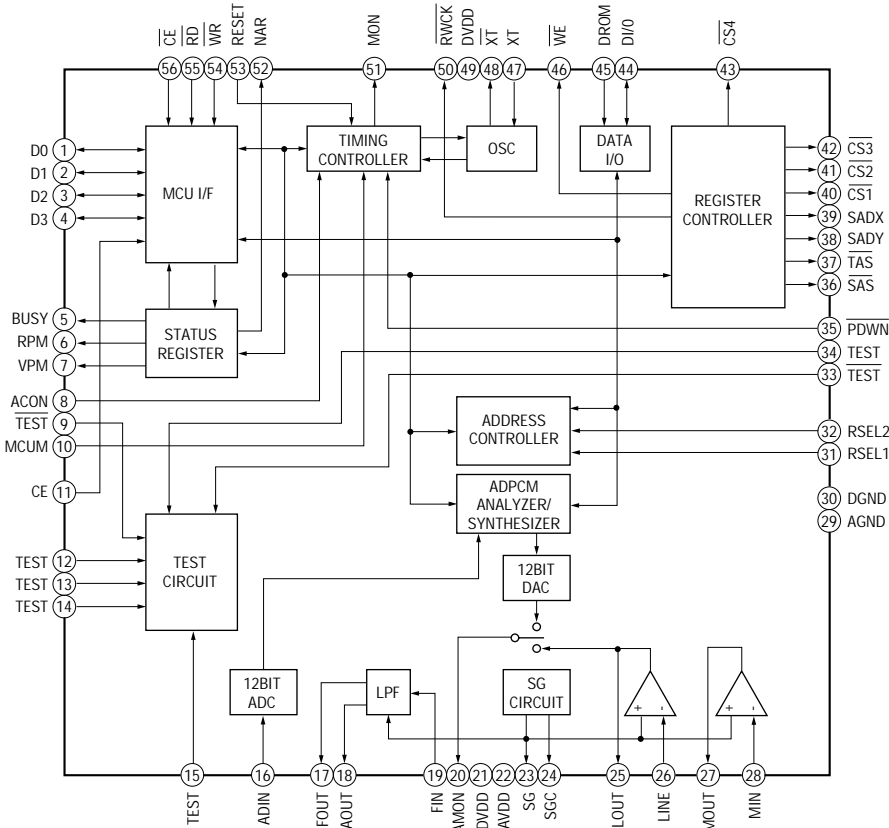
IC604, 634 NJM2160AM-TE2



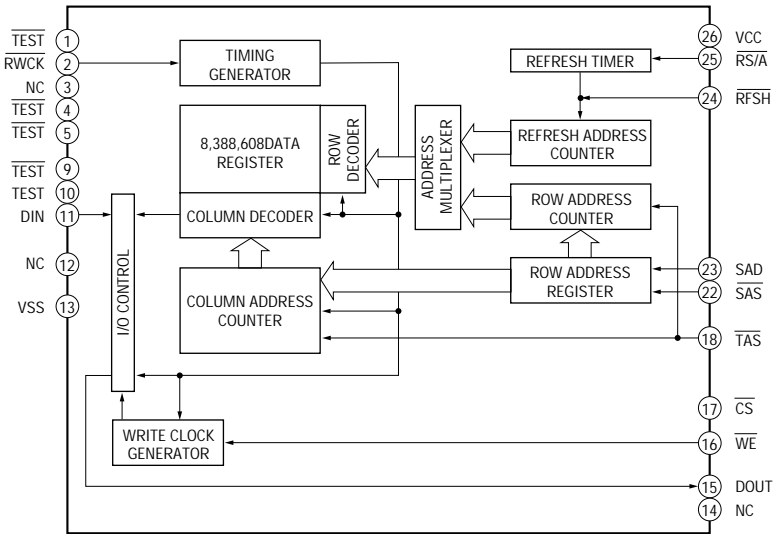
IC901 SAA6588T-118



IC951 MSM6688GS-2K

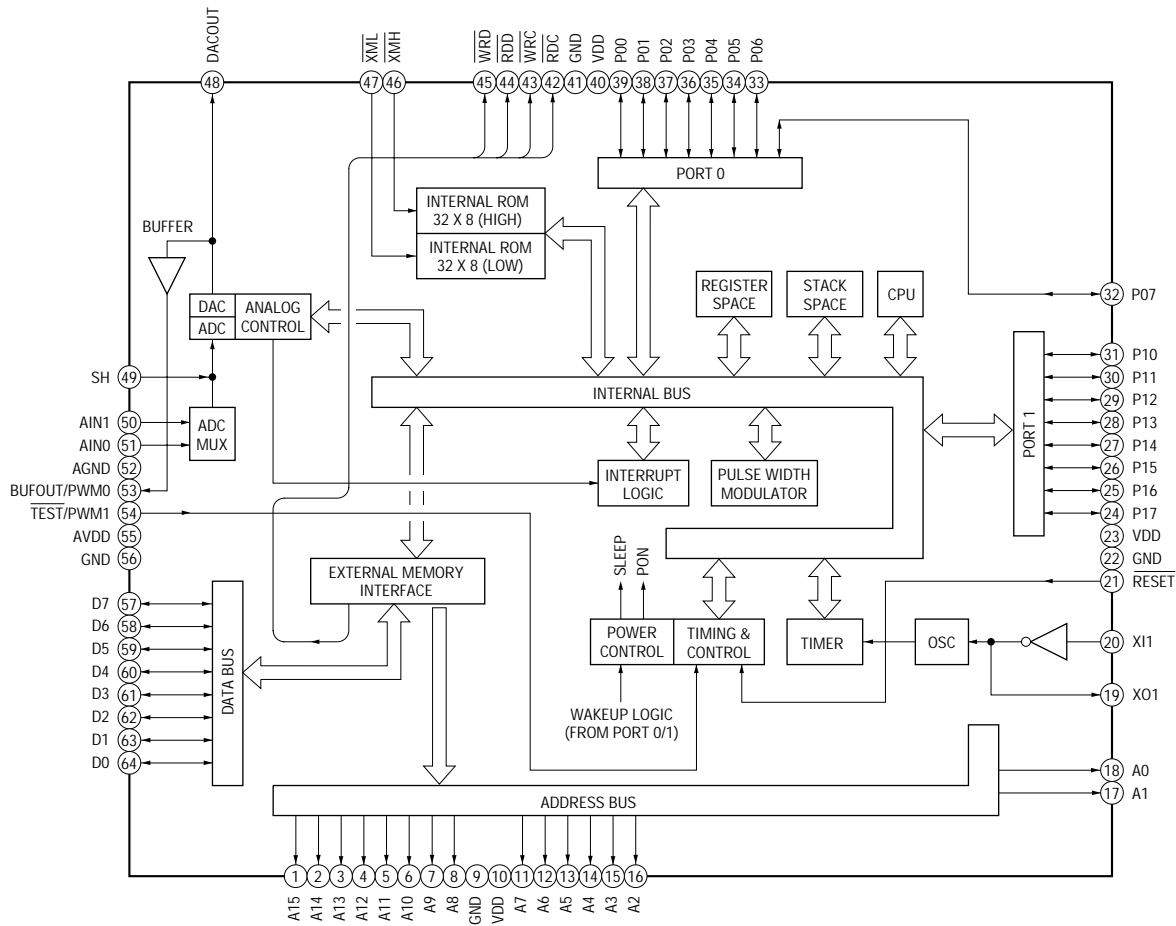


IC952 MSM6685JSDR1

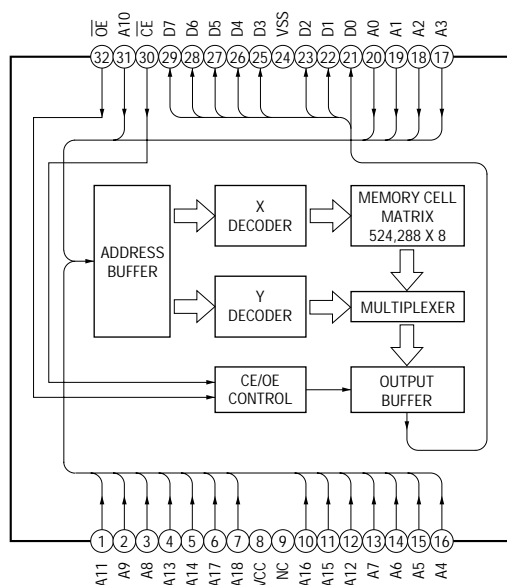


– POWER Board –

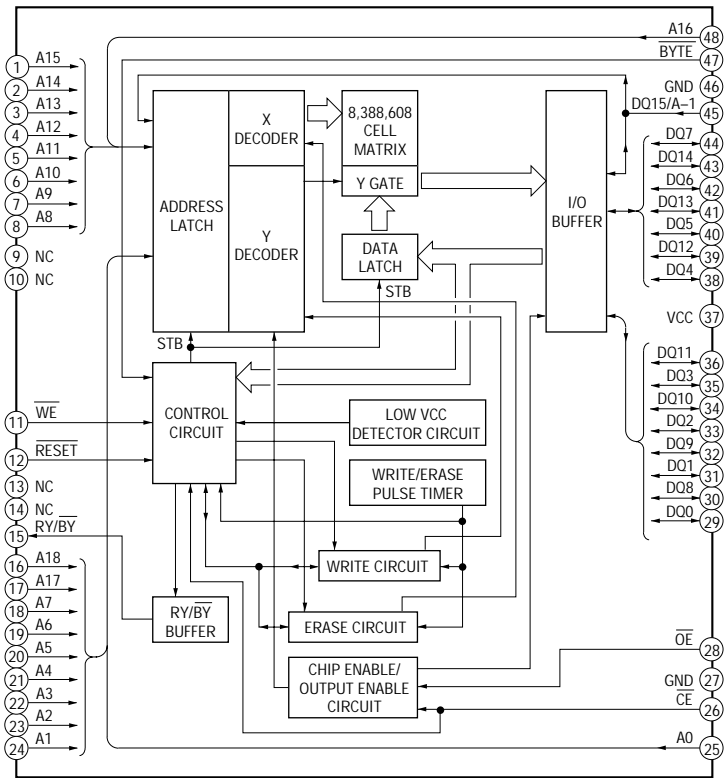
IC801 RSC-164



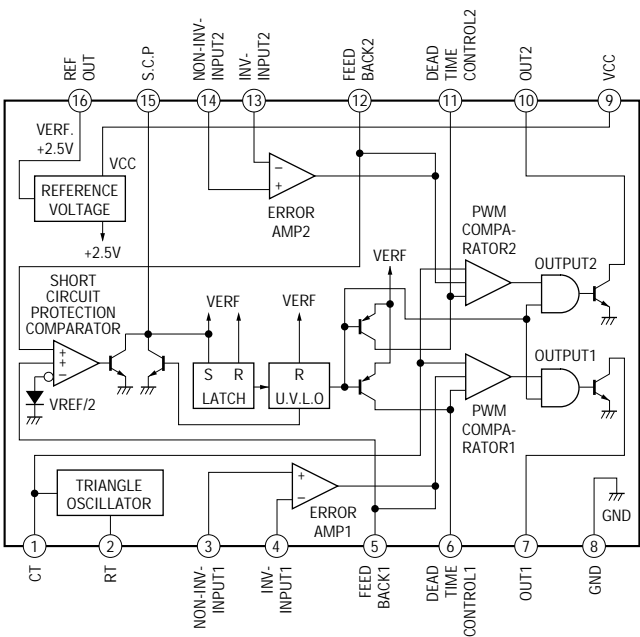
IC803 MSM534001E-49TSKFDR3 (TYPE C)
MSM534001E-50TSKFDR3 (TYPE A)
MSM534001E-51TSKFDR3 (TYPE B)



IC805 MBM29F800TA



IC871 TL1451ACDB-E20



5-23. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC300 CXD2727Q (DIGITAL SIGNAL PROCESSOR, DIGITAL FILTER, D/A CONVERTER)

Pin No.	Pin Name	I/O	Description
1	VSS1	—	Ground terminal (digital system)
2 to 15	T.P	I	Input terminal for the test (fixed at “L”)
16 to 21	TST0 to TST5	I	Input terminal for the test (fixed at “L”)
22 to 24	JPE1 to JPE3	I	External condition jump terminal “H”: condition jump (fixed at “L”)
25	VDD1	—	Power supply terminal (+3.3V) (digital system)
26	AVS3	—	Ground terminal (for D/A converter 1) (analog system)
27	AOUTL1	O	D/A converter 1 (L-ch side) output terminal Analog signal output for front side (L-ch side) output in this set
28	AVD3	—	Power supply terminal (+3.3V) (for D/A converter 1) (analog system)
29	AOUTR1	O	D/A converter 1 (R-ch side) output terminal Analog signal output for rear side (L-ch side) output in this set
30	AVD5	—	Power supply terminal (+3.3V) (for D/A converter 1) (analog system)
31	AVS5	—	Ground terminal (for D/A converter 1) (analog system)
32	AVD1	—	Power supply terminal (+3.3V) (for L-ch side A/D converter) (analog system)
33	AVS1	—	Ground terminal (for L-ch side A/D converter) (analog system)
34	LREF	O	Connected to the bus control for A/D converter (for L-ch side)
35	LIN	I	A/D converter (L-ch side) analog input terminal Tuner and bus audio input signal (L-ch side) in this set
36	AVS7	—	Ground terminal (for D/A converter 2) (analog system)
37	AVD7	—	Power supply terminal (+3.3V) (for D/A converter 2) (analog system)
38	AOUTL2	O	D/A converter 2 (L-ch side) output terminal Not used (open)
39	AVDX	—	Power supply terminal (+3.3V) (for master clock) (analog system)
40	XTLO38	O	System clock output terminal (16.9344 MHz)
41	XTLI38	I	System clock input terminal (16.9344 MHz)
42	AVSX	—	Ground terminal (for master clock) (analog system)
43	AOUTR2	O	D/A converter 2 (R-ch side) output terminal Analog signal output for sub woofer output in this set
44	AVD8	—	Power supply terminal (+3.3V) (for D/A converter 2) (analog system)
45	AVS8	—	Ground terminal (for D/A converter 2) (analog system)
46	RIN	I	A/D converter (R-ch side) analog input terminal Tuner and bus audio input signal (R-ch side) in this set
47	RREF	O	Connected to the bus control for A/D converter (for R-ch side)
48	AVS2	—	Ground terminal (for R-ch side A/D converter) (analog system)
49	AVD2	—	Power supply terminal (+3.3V) (for R-ch side A/D converter) (analog system)
50	AVS6	—	Ground terminal (for D/A converter 3) (analog system)
51	AVD6	—	Power supply terminal (+3.3V) (for D/A converter 3) (analog system)
52	AOUTL3	O	D/A converter 3 (L-ch side) output terminal Analog signal output for rear side (R-ch side) output in this set
53	AVD4	—	Power supply terminal (+3.3V) (for D/A converter 3) (analog system)
54	AOUTR3	O	D/A converter 3 (R-ch side) output terminal Analog signal output for front side (R-ch side) output in this set
55	AVS4	—	Ground terminal (for D/A converter 3) (analog system)
56	VSS2	—	Ground terminal (digital system)
57	XRST	I	System reset signal input from the master controller (IC500) “L”: reset
58	BFOT	O	Master clock signal output terminal Not used (open)

Pin No.	Pin Name	I/O	Description
59	SCK	I	Serial data transfer clock signal input from the master controller (IC500) and liquid crystal display drive controller (IC701)
60	REDY	O	Transfer enable signal output to the master controller (IC500) “L”: transfer prohibition
61	TRDT	O	Serial data output to the master controller (IC500) and liquid crystal display drive controller (IC701)
62	XLAT	I	Serial data latch pulse input from the master controller (IC500)
63	RVDT	I	Serial data input from the master controller (IC500)
64	XS24	I	Serial data 24/32 bit slot selection signal input terminal “L”: 24 bit slot, “H”: 32 bit slot (validity at slave mode) (fixed at “H” in this set)
65	VDD2	—	Power supply terminal (+3.3V) (digital system)
66	VSS3	—	Ground terminal (digital system)
67 to 69	SO1 to SO3	O	Serial data output terminal Not used (open)
70	SOUT	O	Serial data output terminal Not used (open)
71	SI1	I	Serial data input from the CXD2652AR (IC301)
72, 73	SI2, SI3	I	Serial data input terminal Not used (open)
74	SIN	I	Serial data input terminal Not used (open)
75	BCK	I	Bit clock signal (2.8224 MHz) input from the CXD2652AR (IC301)
76	LRCK	I	L/R sampling clock signal (44.1 kHz) input from the CXD2652AR (IC301)
77	XMST	I	Bit clock (BCK) and L/R sampling clock (LRCK) signal master/slave mode selection signal input from the master controller (IC500) “L”: master mode, “H”: slave mode
78	VDD3	—	Power supply terminal (+3.3V) (digital system)
79	AVSP	—	Ground terminal (PLL system)
80	XPLEN	I	PLL enable signal input terminal Normally: fixed at “L”
81	PLCLK	O	PLL clock signal output terminal (22.5792 MHz)
82	XECKSTP	I	PLL clock output control signal input from the master controller (IC500) At “L” is input: fixed at “L” is PLCLK (pin ⑧) At “H” is input: PLL clock signal output from the PLCLK (pin ⑧)
83	AVDP	—	Power supply terminal (+3.3V) (PLL system)
84	VSS4	—	Ground terminal (digital system)
85 to 94	T.P	I	Input terminal for the test Normally: fixed at “L”
95	VDD4	—	Power supply terminal (+3.3V) (digital system)
96	AVSD	—	Ground terminal (for D-RAM)
97 to 99	T.P	I	Input terminal for the test Normally: fixed at “L”
100	AVDD	—	Power supply terminal (+3.3V) (for D-RAM)

• **SERVO BOARD IC301 CXD2652AR**

(DIGITAL SIGNAL PROCESSOR, DIGITAL SERVO PROCESSOR, EFM/ACIRC ENCODER/DECODER, SHOCK PROOF MEMORY CONTROLLER, ATRAC ENCODER/DECODER, 2M BIT D-RAM)

Pin No.	Pin Name	I/O	Description
1	MNT0	O	Focus OK signal output to the MD mechanism controller (IC501) “H” is output when focus is on (“L”: NG)
2	MNT1	O	Track jump detection signal output to the MD mechanism controller (IC501)
3	MNT2	O	Busy monitor signal output to the MD mechanism controller (IC501)
4	MNT3	O	Spindle servo lock status monitor signal output to the MD mechanism controller (IC501)
5	SWDT	I	Writing serial data signal input from the MD mechanism controller (IC501)
6	SCLK	I	Serial data transfer clock signal input from the MD mechanism controller (IC501)
7	XLAT	I	Serial data latch pulse signal input from the MD mechanism controller (IC501)
8	SRDT	O (3)	Reading serial data signal output to the MD mechanism controller (IC501)
9	SENS	O (3)	Internal status (SENSE) output to the MD mechanism controller (IC501)
10	XRST	I	Reset signal input from the MD mechanism controller (IC501) “L”: reset
11	SQSY	O	Subcode Q sync (SCOR) output to the MD mechanism controller (IC501) “L” is output every 13.3 msec Almost all, “H” is output
12	DQSY	O	Digital In U-bit CD format subcode Q sync (SCOR) output terminal “L” is output every 13.3 msec Almost all, “H” is output Not used (open)
13	RECP	I	Laser power selection signal input terminal “L”: playback mode, “H”: recording mode (fixed at “L” in this set)
14	XINT	O	Interrupt status output to the MD mechanism controller (IC501)
15	TX	I	Recording data output enable signal input terminal Writing data transmission timing input (Also serves as the magnetic head on/off output) Not used (fixed at “L”)
16	OSCI	I	System clock signal (512Fs=22.5792 MHz) input from the CXD2727Q (IC300)
17	OSCO	O	System clock signal (512Fs=22.5792 MHz) output terminal Not used (open)
18	XTSL	I	Input terminal for the system clock frequency setting “L”: 45.1584 MHz, “H”: 22.5792 MHz (fixed at “H” in this set)
19	RVDD	—	Power supply terminal (+3.3V) (digital system)
20	RVSS	—	Ground terminal (digital system)
21	DIN	I	Digital audio signal input terminal when recording mode Not used (fixed at “L”)
22	DOUT	O	Digital audio signal output terminal when playback mode Not used (open)
23	ADDT	I	Recording data input terminal Not used (fixed at “L”)
24	DADT	O	Playback data output to the CXD2727Q (IC300)
25	LRCK	O	L/R sampling clock signal (44.1 kHz) output to the CXD2727Q (IC300)
26	XBCK	O	Bit clock signal (2.8224 MHz) output to the CXD2727Q (IC300)
27	FS256	O	Clock signal (11.2896 MHz) output terminal Not used (open)
28	DVDD	—	Power supply terminal (+3.3V) (digital system)
29 to 32	A03 to A00	O	Address signal output to the D-RAM (IC307)
33	A10	O	Address signal output to the external D-RAM Not used (open)
34 to 38	A04 to A08	O	Address signal output to the D-RAM (IC307)
39	A11	O	Address signal output to the external D-RAM Not used (open)
40	DVSS	—	Ground terminal (digital system)
41	XOE	O	Output enable signal output to the D-RAM (IC307) “L” active
42	XCAS	O	Column address strobe signal output to the D-RAM (IC307) “L” active
43	A09	O	Address signal output to the D-RAM (IC307)
44	XRAS	O	Row address strobe signal output to the D-RAM (IC307) “L” active
45	XWE	O	Write enable signal output to the D-RAM (IC307) “L” active

Pin No.	Pin Name	I/O	Description
46	D1	I/O	Two-way data bus with the D-RAM (IC307)
47	D0	I/O	
48	D2	I/O	
49	D3	I/O	
50	MVCI	I	Digital in PLL oscillation input from the external VCO Not used (fixed at “L”)
51	ASYO	O	Playback EFM full-swing output terminal
52	ASYI	I (A)	Playback EFM asymmetry comparator voltage input terminal
53	AVDD	—	Power supply terminal (+3.3V) (analog system)
54	BIAS	I (A)	Playback EFM asymmetry circuit constant current input terminal
55	RFI	I (A)	Playback EFM RF signal input from the CXA2523AR (IC302)
56	AVSS	—	Ground terminal (analog system)
57	PDO	O (3)	Phase comparison output for clock playback analog PLL of the playback EFM Not used (open)
58	PCO	O (3)	Phase comparison output for master clock of the recording/playback EFM master PLL
59	FILI	I (A)	Filter input for master clock of the recording/playback master PLL
60	FILO	O (A)	Filter output for master clock of the recording/playback master PLL
61	CLTV	I (A)	Internal VCO control voltage input of the recording/playback master PLL
62	PEAK	I (A)	Light amount signal (RF/ABCD) peak hold input from the CXA2523AR (IC302)
63	BOTM	I (A)	Light amount signal (RF/ABCD) bottom hold input from the CXA2523AR (IC302)
64	ABCD	I (A)	Light amount signal (ABCD) input from the CXA2523AR (IC302)
65	FE	I (A)	Focus error signal input from the CXA2523AR (IC302)
66	AUX1	I (A)	Auxiliary signal (I ₃ signal/temperature signal) input terminal Not used (fixed at “H”)
67	VC	I (A)	Middle point voltage (+1.65V) input from the CXA2523AR (IC302)
68	ADIO	O (A)	Monitor output of the A/D converter input signal Not used (open)
69	AVDD	—	Power supply terminal (+3.3V) (analog system)
70	ADRT	I (A)	A/D converter operational range upper limit voltage input terminal (fixed at “H” in this set)
71	ADRB	I (A)	A/D converter operational range lower limit voltage input terminal (fixed at “L” in this set)
72	AVSS	—	Ground terminal (analog system)
73	SE	I (A)	Sled error signal input from the CXA2523AR (IC302)
74	TE	I (A)	Tracking error signal input from the CXA2523AR (IC302)
75	AUX2	I (A)	Auxiliary signal input terminal Light amount signal input from the CXA2523AR (IC302)
76	DCHG	I (A)	Connected to the +3.3V power supply
77	APC	I (A)	Error signal input for the laser automatic power control Not used (fixed at “L”)
78	ADFG	I	ADIP duplex FM signal (22.05 kHz \pm 1 kHz) input from the CXA2523AR (IC302)
79	F0CNT	O	Filter f0 control signal output terminal Not used (open)
80	XLRF	O	Serial data latch pulse signal output terminal Not used (open)
81	CKRF	O	Serial data transfer clock signal output terminal Not used (open)
82	DTRF	O	Writing serial data output terminal Not used (open)
83	APCREF	O	Control signal output to the reference voltage generator circuit for the laser automatic power control
84	LDDR	O	PWM signal output for the laser automatic power control Not used (open)
85	TRDR	O	Tracking servo drive PWM signal (–) output to the BH6511FS (IC303)
86	TFDR	O	Tracking servo drive PWM signal (+) output to the BH6511FS (IC303)
87	DVDD	—	Power supply terminal (+3.3V) (digital system)
88	FFDR	O	Focus servo drive PWM signal (+) output to the BH6511FS (IC303)
89	FRDR	O	Focus servo drive PWM signal (–) output to the BH6511FS (IC303)
90	FS4	O	Clock signal (176.4 kHz) output terminal (X’tal system) Not used (open)

Pin No.	Pin Name	I/O	Description
91	SRDR	O	Sled servo drive PWM signal (–) output to the BH6511FS (IC303)
92	SFDR	O	Sled servo drive PWM signal (+) output to the BH6511FS (IC303)
93	SPRD	O	Spindle servo drive PWM signal (–) output to the BH6511FS (IC303)
94	SPFD	O	Spindle servo drive PWM signal (+) output to the BH6511FS (IC303)
95	FGIN	I	Not used (fixed at “L”)
96	TEST1	I	Input terminal for the test (fixed at “L”)
97	TEST2	I	
98	TEST3	I	
99	DVSS	—	Ground terminal (digital system)
100	EFMO	O	EFM signal output terminal when recording mode Not used (open)

* I (A) for analog input, O (3) for 3-state output, and O (A) for analog output in the column I/O.

• SERVO BOARD IC302 CXA2523AR (RF AMP, FOCUS/TRACKING ERROR AMP)

Pin No.	Pin Name	I/O	Description
1	I	I	I-V converted RF signal I input from the optical pick-up block detector
2	J	I	I-V converted RF signal J input from the optical pick-up block detector
3	VC	O	Middle point voltage (+1.65V) generation output terminal
4 to 9	A to F	I	Signal input from the optical pick-up detector
10	PD	I	Light amount monitor input from the optical pick-up block laser diode
11	APC	O	Laser amplifier output terminal to the automatic power control circuit
12	APCREF	I	Reference voltage input terminal for setting laser power from the CXD2652AR (IC301)
13	GND	—	Ground terminal
14	TEMPI	I	Connected to the temperature sensor Not used (open)
15	TEMPR	O	Output terminal for a temperature sensor reference voltage Not used (open)
16	SWDT	I	Writing serial data input from the MD mechanism controller (IC501)
17	SCLK	I	Serial data transfer clock signal input from the MD mechanism controller (IC501)
18	XLAT	I	Serial data latch pulse signal input from the MD mechanism controller (IC501)
19	XSTBY	I	Standby signal input terminal “L”: standby (fixed at “H” in this set)
20	F0CNT	I	Center frequency control voltage input terminal of internal circuit (BPF22, BPF3T, EQ) input terminal
21	VREF	O	Reference voltage output terminal Not used (open)
22	EQADJ	I	Center frequency setting terminal for the internal circuit (EQ)
23	3TADJ	I	Center frequency setting terminal for the internal circuit (BPF3T)
24	VCC	—	Power supply terminal (+3.3V)
25	WBLADJ	I	Center frequency setting terminal for the internal circuit (BPF22)
26	TE	O	Tracking error signal output to the CXD2652AR (IC301)
27	CSLED	I	Connected to the external capacitor for low-pass filter of the sled error signal
28	SE	O	Sled error signal output to the CXD2652AR (IC301)
29	ADFM	O	FM signal output of the ADIP
30	ADIN	I	Receives a ADIP FM signal in AC coupling
31	ADAGC	I	Connected to the external capacitor for ADIP AGC
32	ADFG	O	ADIP duplex signal (22.05 kHz \pm 1 kHz) output to the CXD2652AR (IC301)
33	AUX	O	Auxiliary signal (I ₃ signal/temperature signal) output terminal Not used (open)
34	FE	O	Focus error signal output to the CXD2652AR (IC301)
35	ABCD	O	Light amount signal (ABCD) output to the CXD2652AR (IC301)
36	BOTM	O	Light amount signal (RF/ABCD) bottom hold output to the CXD2652AR (IC301)
37	PEAK	O	Light amount signal (RF/ABCD) peak hold output to the CXD2652AR (IC301)
38	RF	O	Playback EFM RF signal output to the CXD2652AR (IC301)
39	RFAGC	I	Connected to the external capacitor for RF auto gain control circuit
40	AGCI	I	Receives a RF signal in AC coupling
41	COMPO	O	User comparator output terminal Not used (open)
42	COMPP	I	User comparator input terminal Not used (fixed at “L”)
43	ADDC	I	Connected to the external capacitor for cutting the low band of the ADIP amplifier
44	OPO	O	User operational amplifier output terminal Not used (open)
45	OPN	I	User operational amplifier inversion input terminal Not used (fixed at “L”)
46	RFO	O	RF signal output terminal
47	MORFI	I	Receives a MO RF signal in AC coupling
48	MORFO	O	MO RF signal output terminal

• MAIN BOARD IC500 MB90574APMT-G-215-BND (MASTER CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	RE-IN0	I	Jog dial pulse input of the rotary encoder (EN900) (for VOLUME/BASS/TREBLE/BALANCE/FADER control)
2	RE-IN1	I	
3	TIR-BUSY	I	Busy detection signal input from the MSM6688GS-2K (IC951) “H” is output while MSM6688GS-2K (IC951) is executing a command
4	TIR-PDOWN	O	Power down control signal output to the MSM6688GS-2K (IC951) “L”: power down
5	TIR-RST	O	Reset signal output to the MSM6688GS-2K (IC951) “H”: reset
6	SYSRST	O	System reset signal output to the MD mechanism controller (IC501), SONY bus interface (IC271) and liquid crystal display drive controller (IC701) “L”: reset
7	BUS-ON	O	Bus on/off control signal output to the MD mechanism controller (IC501), SONY bus interface (IC271) and liquid crystal display drive controller (IC701) “L”: bus on
8	VCC	—	Power supply terminal (+5V)
9	DSP STP	O	PLL clock output control signal to the CXD2727Q (IC300) At “L” is output: fixed at “L” is PLCLK (pin ⑧ of IC300 CXD2727Q) At “H” is output: PLL clock signal output from the PLCLK (pin ⑧ of IC300 CXD2727Q)
10	NCO	O	Not used (open)
11	CSV PLAY	O	Voice guide and DSP sound selection to the CSV mix switch (IC691) “L”: voice guide mode
12	FLS SI	I	Input terminal at the flash memory data write mode
13	FLS SO	O	Output terminal at the flash memory data write mode
14	FLASH-W	I	Internal flash memory data write mode detection signal input terminal “L”: data write mode Not used (fixed at “H” in this set)
15	BEEP	O	Beep sound drive signal output terminal
16	CSV ON	O	CSV (IC801) power supply control output terminal “H”: CSV power on
17	DSP SI	I	Serial data input from the CXD2727Q (IC300)
18	DSP SO	O	Serial data output to the CXD2727Q (IC300)
19	DSP CLK	O	Serial data transfer clock signal output to the CXD2727Q (IC300) and liquid crystal display drive controller (IC701)
20	UNI SI	I	Serial data input from the SONY bus interface (IC271)
21	UNI SO	O	Serial data output to the SONY bus interface (IC271)
22	UNI CKIO	I/O	Serial clock signal output to the MD mechanism controller (IC501), SONY bus interface (IC271) and liquid crystal display drive controller (IC701) or serial clock signal input from the MD mechanism controller (IC501) (for SONY bus)
23	SD-IN	I	Station detector detect input from the FM/AM tuner unit (TU101) Stop level for SEEK, BTM, etc. is determined SD is present at input of “H”
24	SIRCS	I	Sircs remote control signal input from the remote control receiver (IC910)
25	CSV-SI	I	Serial data input from the CSV (IC801)
26	CSV-SO	O	Serial data output to the CSV (IC801)
27	CSV-CKO	O	Serial data transfer clock signal output to the CSV (IC801)
28	DSP RST	O	Reset signal output to the CXD2727Q (IC300) “L”: reset
29	ST-MONO	I/O	FM stereo broadcasting detection signal input from the FM/AM tuner unit (TU101), or forced monaural control signal output to the FM/AM tuner unit (TU101) “L” is input in the FM stereo mode, or “L” is output in the forced monaural mode
30	DSP XMST	O	Bit clock (BCK) and L/R sampling clock (LRCK) signal master/slave mode selection signal output to the CXD2727Q (IC300) “L”: master mode, “H”: slave mode
31	WIDE	O	IF band select signal output terminal “H”: wide mode In receiving FM signals, interference noise from adjacent stations is removed by narrowing the IF band automatically in the tuner unit so as to raise the selectivity, but in this case, the distortion may increase and accordingly, the IF band is widened forcibly

Pin No.	Pin Name	I/O	Description
32	NARROW	O	IF band select signal output to the FM/AM tuner unit (TU101) “H”: narrow mode In receiving FM signals, interference noise from adjacent stations is removed by narrowing the IF band automatically in the tuner unit so as to raise the selectivity
33	VSS	—	Ground terminal
34	C	—	Connected to coupling capacitor for the power supply
35	<u>RAMBU</u>	I	Internal RAM reset detection signal input terminal Input terminal to check that RAM data are not destroyed due to low voltage This checking is made within 100 msec after reset Not used (open)
36	MUTE	O	Audio line muting on/off control signal output terminal “H”: muting on
37	AUDIO SEL0	O	Analog signal source selection output to the CXD2727Q (IC300)
38	DVCC	—	Power supply terminal (+5V) (for D/A converter)
39	DVSS	—	Ground terminal (for D/A converter)
40	AUDIO SEL1	O	Analog signal source selection output to the CXD2727Q (IC300)
41	LCDANG	O	View field angle control signal is output when front panel is fully opened “H”: front panel is fully opened
42	AVCC	—	Power supply terminal (+5V) (for A/D converter)
43	AVRH	I	Reference voltage (+5V) input terminal (for A/D converter)
44	AVRL	I	Reference voltage (0V) input terminal (for A/D converter)
45	AVSS	—	Ground terminal (for A/D converter)
46	VSM (S-METER)	I	FM and AM signal meter voltage detection input from the FM/AM tuner unit (TU101) (A/D input)
47	KEY-IN0	I	Key input terminal (A/D input) (LSW900, S900, LSW901 to LSW904, LSW906) OFF, SEEK/AMS ►►► ►► + ◄◄◄ ◄◄◄ –, SOURCE, SHIFT, MODE, SOUND, DSPL keys input
48	KEY-IN1	I	Key input terminal (A/D input) (LSW902, LSW905, LSW907 to LSW918) ▲, LIST, PTY, AF/TA, TIR, 10 to 3 keys input
49	RC-IN0	I	Rotary remote commander key input terminal (A/D input)
50	DSTSEL0	I	Destination setting terminal (fixed at “L”)
51	DSTSEL1	I	Destination setting terminal (fixed at “H”)
52	QUALITY	I	Noise level detection signal input at SEEK mode
53	MTP	I	Multi-path detection signal input from the RDS decoder (IC901)
54	VCC	—	Power supply terminal (+5V)
55	<u>VOL LOAD</u>	O	Serial data latch pulse output to the electrical volume (IC602, IC632)
56	VOL DATA L	O	Setting data output (L-ch) to the electrical volume (IC602)
57	VOL DATA R	O	Setting data output (R-ch) to the electrical volume (IC632)
58	<u>VOL CLK</u>	O	Serial clock signal output to the electrical volume (IC602, IC632)
59	<u>DSP XLAT</u>	O	Serial data latch pulse signal output to the CXD2727Q (IC300)
60	<u>RC-IN1</u>	I	Rotary remote commander shift key input terminal “L”: shift
61	<u>ACC IN</u>	I	Accessory detect signal input terminal “L”: accessory on
62	POW-ON	O	Main system power supply on/off control signal output “H”: power on
63	VSS	—	Ground terminal
64	<u>BOOT</u>	O	Serial data output to the liquid crystal display drive controller (IC701) “L” is output when writing change
65	PWM IN	I	Power supply control signal input from the power control (IC871)
66	NCO	O	Not used (open)
67	RDS-DAVN	I	Data transmit completed detect signal input from the RDS decoder (IC901) “H”: active
68	CD/MD	I	Setting for the internal mechanism CD or MD “L”: CD, “H”: MD (fixed at “H” in this set)

Pin No.	Pin Name	I/O	Description
69	CD/MD ON	I	CD/MD servo power supply input detect terminal
70	I2C-SDA	I/O	Two-way data bus with the FM/AM PLL (IC151)
71	I2C-SCL	O	Serial clock signal output to the FM/AM PLL (IC151)
72	SHIFT OUT	O	Shift clock control signal output of the power control (IC871)
73	X1A	O	Sub system clock output terminal (32.768 kHz)
74	X0A	I	Sub system clock input terminal (32.768 kHz)
75	NCO	O	Not used (open)
76	KEYACK	I	Input of acknowledge signal for the key entry Acknowledge signal is input to accept function and eject keys in the power off status On at input of "H"
77	BU-IN	I	Battery detect signal input from the SONY bus interface (IC271) and battery detect circuit "L" is input at low voltage
78	SP LATCH	O	Serial data latch pulse output for spectrum analyzer section to the liquid display drive controller (IC701)
79	DSP REDY	I	Transfer enable signal output from the liquid crystal display drive controller (IC701) "L": transfer prohibition, "H": transfer permission
80	$\overline{\text{TEST}}$	I	Setting terminal for the test mode "L": test mode, Normally: fixed at "H"
81	EMPH	O	Emphasis control signal output to the MD mechanism controller (IC501)
82	$\overline{\text{WAKE UP}}$	O	DC/DC converter power supply on/off control signal output terminal Not used (open)
83	TEL-MUTE	I	Telephone muting signal input terminal At input of "L", the signal is attenuated by -20 dB
84	TU-ON	O	Tuner system power supply on/off control signal output "H": tuner power on
85	$\overline{\text{ILL IN}}$	I	Auto dimmer control illumination line detection signal input terminal "L" is input at dimmer detection
86	$\overline{\text{HSTX}}$	I	Hardware standby input terminal "L": hardware standby mode Reset signal input in this set
87	MD2	I	Setting terminal for the CPU operational mode (fixed at "L" in this set)
88	MD0	I	Setting terminal for the CPU operational mode (fixed at "H" in this set)
89	MD1	I	Setting terminal for the CPU operational mode (fixed at "H" in this set)
90	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator (IC506) and reset switch (S703) "L": reset "L" is input for several 100 msec after power on, then it changes to "H"
91	VSS	—	Ground terminal
92	X0	I	Main system clock input terminal (3.58 MHz)
93	X1	O	Main system clock output terminal (3.58 MHz)
94	VCC	—	Power supply terminal (+5V)
95	DOOR-IND	O	LED drive signal output of the illumination LED (LED706) "H": LED on "H" is output to turn on LED when front panel is opened
96	DSP ON	O	Power supply on/off control signal output for the CXD2727Q (IC300) "H": DSP on
97	NCO	O	Not used (open)
98	AMP STBY	O	Standby on/off control signal output to the power amplifier (IC481) "L": standby mode, "H": amp on
99 to 102	TIR-D0 to TIR-D3	I/O	Two-way data bus with the MSM6688GS (IC951)
103	$\overline{\text{TIR-RD}}$	O	Data read strobe signal output to the MSM6688GS (IC951) "L" is output when data (D0 to D3) are output to the MSM6688GS (IC951)
104	$\overline{\text{TIR-WR}}$	O	Data write strobe signal output to the MSM6688GS (IC951) "L" is output when data (D0 to D3) are output to the MSM6688GS (IC951)
105	TIR-CE1	O	Chip enable signal output to the MSM6688GS (IC951)
106	$\overline{\text{TIR-CE0}}$	O	$\overline{\text{TIR-WR}}$ (pin ⑩) or $\overline{\text{TIR-RD}}$ (pin ⑩) is accepted when CE1 is "L" or $\overline{\text{CE0}}$ is "H" respectively $\overline{\text{TIR-WR}}$ (pin ⑩) or $\overline{\text{TIR-RD}}$ (pin ⑩) is not accepted when CE1 is "H" or $\overline{\text{CE0}}$ is "L" respectively

Pin No.	Pin Name	I/O	Description
107	$\overline{\text{AD-ON}}$	O	A/D converter power control signal output terminal When the KEYACK (pin ⑦6) that controls reference voltage power for key A/D conversion input is active, “L” is output from this terminal to enable the input
108	NCO	O	Not used (open)
109	$\overline{\text{NOSE-SW}}$	I	Front panel block remove/attach detection signal input terminal “L”: front panel is attached
110	CSV REQ	I	Serial data transfer request input from the CSV (IC801)
111	CSV CE	O	Chip enable signal output to the CSV (IC801) “H”: active
112	CSV RST	O	Reset signal output to the CSV (IC801) and flash memory (IC805) “L”: reset
113	NCO	O	Not used (open)
114	FM-ON	O	FM system power supply on/off control signal output “L”: AM power on, “H”: FM power on
115	$\overline{\text{DOOR-SW}}$	I	Front panel open/close detection signal input “L” is input when the front panel is closed
116	NS-MASK	O	Discharge control signal output for the noise detection circuit “H”: discharge
117	$\overline{\text{SEEK}}$	O	Seek control signal output to the FM/AM tuner unit (TU101) AM mode: Used for IF count output/SD output request/AGC cut at SEEK or BTM FM mode: Used for SD speed up at SEEK, BTM, or AF “L” is output at tuner off
118	AF MUTE	O	Muting on/off control signal output for the tuner signal (FM and AM) “H”: muting on
119	VSS	—	Ground terminal
120	SSTOP	I	IF counter request signal input from the FM/AM PLL (IC151)

• SERVO BOARD IC501 CXP84340-216Q (MD MECHANISM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1 to 5	TIN3 to TIN7	I/O	Input of the 4×8 matrix test keys (“L” is always output, except in test mode) Not used (open)
6	LOAD	O	Loading motor control signal output to the loading motor drive (IC305) “H” active *1
7	EJECT	O	Loading motor control signal output to the loading motor drive (IC305) “H” active *1
8, 9	NCO	O	Not used (open)
10	MDMON	O	Power supply on/off control signal output of the MD mechanism deck section main power supply and loading motor drive (IC305) power supply “H”: power on
11	$\overline{\text{E-SW}}$	I	Inputs the disc loading completion detect switch detection signal “L”: When completed of the disc loading operation
12	AG-OK	O	Output of aging status in test mode “L”: under aging, “H”: aging completed Not used (open)
13	ADJ-OK	O	Output of status when aging completed in test mode “L”: aging NG, “H”: aging OK Not used (open)
14 to 17	NCO	O	Not used (open)
18	DFCTSEL	I	Select whether defect function is used for the CXD2652AR (IC301) “L”: used this function, “H”: not used this function (fixed at “H” in this set)
19	DPLLSEL	I	Select whether digital PLL function is used for the CXD2652AR (IC301) “L”: used this function, “H”: not used this function (fixed at “H” in this set)
20	EMPHSEL	I	Select whether emphasis signal output from pin or unilink data “L”: outputs from both pin and unilink data, “H”: output from pin only (fixed at “H” in this set)
21	LOCK	O	Mini-disc lock detection signal output to the liquid crystal display driver (IC701) “H”: lock CLV lock status input in test mode
22	NCO	O	Not used (open)
23	2M/ $\overline{4M}$	I	Select whether D-RAM capacitance 2M bit or 4M bit “L”: 4M bit (external D-RAM), “H”: 2M bit (internal D-RAM of CXD2652AR) (fixed at “L” in this set)
24, 25	NCO	O	Not used (open)
26	MNT0	I	Focus OK signal input from the CXD2652AR (IC301) “H” is input when focus is on (“L”: NG)
27	MNT1	I	Track jump detection signal input from the CXD2652AR (IC301)
28	MNT2	I	Busy monitor signal input from the CXD2652AR (IC301)
29	MNT3	I	Spindle servo lock status monitor signal input from the CXD2652AR (IC301)
30	$\overline{\text{RESET}}$	I	System reset signal input from the master controller (IC500), reset signal generator (IC506) and reset switch (S703) “L”: reset For several hundreds msec. after the power supply rises, “L” is input, then it changes to “H”
31	EXTAL	O	Main system clock output terminal (10 MHz)
32	XTAL	I	Main system clock input terminal (10 MHz)
33	VSS	—	Ground terminal
34	TX	O	Sub system clock output terminal (32.768 kHz) Not used (open)
35	TEX	I	Sub system clock input terminal (32.768 kHz) Not used (fixed at “L”)
36	AVSS	—	Ground terminal (for A/D converter)
37	AVREF	I	Reference voltage input terminal (+5V) (for A/D converter)
38	INIT	I	Initial reset signal input terminal (A/D input) (fixed at “H”)
39	TEMP	I	Temperature sensor (TH501) input terminal (A/D input)
40	ACNT	I	Select the number of load/eject aging times (A/D input) 0H – 54H (30 times), 55H – 0A9H (20 times), 0AAH – OFFH (10 times) (fixed at “L”)
41	DO-SEL	I	Select the digital output bits (A/D input)
42	EE-CS	O	Chip select signal output to the external EEPROM device Not used (open)
43	EE-CKO	O	Serial data transfer clock signal output to the external EEPROM device Not used (open)
44	EE-SIO	I/O	Two way data bus with the external EEPROM device Not used (open)
45	MD-SO	O	Writing serial data signal output to the CXD2652AR (IC301) and CXA2523AR (IC302)

Pin No.	Pin Name	I/O	Description
46	LINKOFF	O	Unilink on/off control signal output for the SONY bus “L”: link on, “H”: link off
47	UNIREQ	O	Data request signal output terminal (for SONY bus) “H”: request on Not used (open)
48	UNICKIO	I/O	Serial clock signal input from the master controller (IC500) or serial clock signal output to the SONY bus interface (IC271) and master controller (IC500) (for SONY bus)
49	UNISI	I	Serial data input from the SONY bus interface (IC271)
50	UNISO	O	Serial data output to the SONY bus interface (IC271)
51	MD-CKO	O	Serial data transfer clock signal output to the CXD2652AR (IC301) and CXA2523AR (IC302)
52	MD-SI	I	Reading serial data signal input from the CXD2652AR (IC301)
53	NCO	O	Not used (open)
54	SENS	I	Internal status (SENSE) input from the CXD2652AR (IC301)
55	CC-XINT	I	Interrupt status input from the CXD2652AR (IC301)
56	<u>LIMIT-IN</u>	I	Detection input from the sled limit-in detect switch The optical pick-up is inner position when “L”
57	EJT-KEY	I	Eject request signal input terminal “L”: eject on Not used (fixed at “H”)
58	ERROR-PWM	O	PWM error monitor output terminal (C1 and ATER is output when test mode) Not used (open)
59	<u>MD-RST</u>	O	Reset signal output to the CXD2652AR (IC301) and BH6511FS (IC303) “L”: reset
60	BU-IN	I	Battery detect signal input from the SONY bus interface (IC271) and battery check circuit “H”: battery on
61	<u>BUS-ON</u>	I	SONY bus on/off control signal input from the master controller (IC500) “L”: bus on
62	SQSY	I	Subcode Q sync (SCOR) input from the CXD2652AR (IC301) “L” is input every 13.3 msec Almost all, “H” is input
63	<u>C-SW</u>	I	Inputs the disc loading start or disc eject completion detect switch detection signal “L”: When start or eject completed of the disc loading operation
64	MD-LAT	O	Serial data latch pulse signal output to the CXD2652AR (IC301) and CXA2523AR (IC302)
65	MD-ON	O	Power supply on/off control signal output of the MD mechanism deck section main power supply “H”: power on
66	DEEMP	O	Emphasis on/off control signal output to the master controller (IC500) “H”: emphasis on
67	A-MUTE	O	Audio muting on/off control signal output terminal
68	NCO	O	Not used (open)
69	TSTCKO	O	Output of clock signal for the test mode display Not used (open)
70	TSTSO	O	Output of data for the test mode display Not used (open)
71	<u>TSTMOD</u>	I	Setting terminal for the test mode “L”: test mode, “H”: normal mode
72	VCC	—	Power supply terminal (+5V)
73	NIL	I	Not used (fixed at “H”)
74 to 77	TOUT0 to TOUT3	O	Output of the 4×8 matrix test keys Not used (open)
78 to 80	TIN0 to TIN2	I/O	Input of the 4×8 matrix test keys (“L” is always output, except in test mode) Not used (open)

*1 Loading motor (M903) control

Operation Terminal	IN	OUT	BRAKE	STOP
LOAD (pin ⑥)	“H”	“L”	“H”	“L”
EJECT (pin ⑦)	“L”	“H”	“H”	“L”

• MAIN BOARD IC701 HD6432355A08F (LIQUID CRYSTAL DISPLAY DRIVE CONTROLLER)

Pin No.	Pin Name	I/O	Description
1, 2	PG3, PG4	O	Not used (open)
3	VSS	—	Ground terminal
4	NC	—	Not used (open)
5	VCC	—	Power supply terminal (+5V)
6 to 9	PC0 to PC3	O	Not used (open)
10	VSS	—	Ground terminal
11 to 14	PC4 to PC7	O	Not used (open)
15 to 18	PB0 to PB3	O	Not used (open)
19	VSS	—	Ground terminal
20 to 23	PB4 to PB7	O	Not used (open)
24 to 27	PA0 to PA3	O	Not used (open)
28	VSS	—	Ground terminal
29 to 32	PA4/IRQ4 to PA7/IRQ7	O	Not used (open)
33	SP-LAT	I	Serial data latch pulse input for spectrum display from the master controller (IC500) “H”: active
34	P66/IRQ2	O	Not used (open)
35, 36	VSS	—	Ground terminal
37	P65/IRQ1	O	Not used (open)
38	$\overline{\text{BUS-ON}}$	I	Bus on/off control signal output from the master controller (IC500) “L”: bus on
39	VCC	—	Power supply terminal (+5V)
40	$\overline{\text{CD/MD}}$	I	Setting terminal for the internal mechanism CD or MD “L”: CD, “H”: MD (fixed at “H” in this set)
41 to 43	PE1 to PE3	O	Not used (open)
44	VSS	—	Ground terminal
45	TIR IND	O	LED drive signal output of the TIR indicator (LED705) “H”: LED on
46, 47	PE5, PE6	O	Not used (open)
48	MD LOCK	I	Mini-disc lock detection signal input from the MD mechanism controller (IC501) “H”: lock CLV lock status output in test mode
49	BU-IN	I	Battery detect signal input from the SONY bus interface (IC271) and battery detect circuit “L” is input at low voltage
50	LINK-OFF	O	Link on/off control signal output for the SONY bus “L”: link on, “H”: link off Not used (open)
51	PD2	O	Not used (open)
52	ILL-ON	O	Power on/off control signal output of the illumination LED “H”: power on
53	VSS	—	Ground terminal
54	$\overline{\text{DOOR-SW}}$	I	Front panel open/close detection signal input “L” is input when the front panel is closed
55	NCO	O	Not used (open)
56	PD6	O	Not used (open)
57	$\overline{\text{BOOT}}$	I	Serial data input at the flash memory writing mode “L” is input when writing change
58	VCC	—	Power supply terminal (+5V)
59	NCO	O	Not used (open)
60	TX/FL-SO/ LCDDATA	O	Display serial data output to the liquid crystal display driver (IC900, 920) Output terminal for UART transfer data when writing into internal flash memory data
61	SP-SI	I	Spectrum analyzer display serial data input from the CXD2727Q (IC300)
62	RX	I	Input terminal for UART transfer data when writing into internal flash memory data

Pin No.	Pin Name	I/O	Description
63	SP-SCK	I	Spectrum analyzer display serial data transfer clock signal input from the master controller (IC500)
64	LCDCLK	O	Display serial data transfer clock signal output to the liquid crystal display driver (IC900, 920)
65	VSS	—	Ground terminal
66	$\overline{\text{LCDINH}}$	O	Blank indicate control signal output to the liquid crystal display driver (IC900, 920) “L”: no display
67, 68	VSS	—	Ground terminal
69	$\overline{\text{LCDCE0}}$	O	Chip enable signal output to the liquid crystal display driver (IC900) “H” active
70	$\overline{\text{LCDCE1}}$	O	Chip enable signal output to the liquid crystal display driver (IC920) “L” active
71	P63	O	Not used (open)
72 to 78	P27 to P21	O	Not used (open)
79	FL W	O	Flash memory data write control signal output terminal “H”: active
80	FWE (L)	I	Flash memory data write enable signal input terminal
81	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator (IC506) and reset switch (S703) “L” is input for several 100 msec after power on, then it changes to “H”
82	NMI (H)	I	Non maskable interrupt input terminal Connect the backup detect circuit (BU-IN pin ④9) in this set
83	$\overline{\text{STBY}}$ (H)	I	Hard ware standby input terminal Not used (fixed at “H”)
84	VCC	—	Power supply terminal (+5V)
85	XTAL	O	System clock output terminal (18.432 MHz)
86	EXTAL	I	System clock input terminal (18.432 MHz)
87	VSS	—	Ground terminal
88	PF7	O	Not used (open)
89	VCC	—	Power supply terminal (+5V)
90 to 96	PF6 to PF0	O	Not used (open)
97	UNI-SO	O	Serial data output to the SONY bus interface (IC271)
98	UNI-SO	I	Serial data input from the SONY bus interface (IC271)
99, 100	VSS	—	Ground terminal
101	UNI-SCK	I/O	Serial clock signal input /output with the MD mechanism controller (IC501) and master controller (IC500) or serial clock signal output to the SONY bus interface (IC271)
102	P53/ADTRG	O	Not used (open)
103	AVCC	—	Power supply terminal (+5V) (for A/D converter)
104	VREF	I	Reference voltage (+5V) input terminal (for A/D converter)
105 to 110	P40/AN0 to P45/AN5	I	Not used (fixed at “L”)
111	P46/AN6/DA0	I	Not used (fixed at “L”)
112	P47/AN7/DA1	I	Not used (fixed at “L”)
113	AVSS	—	Ground terminal (for A/D converter)
114	VSS	—	Ground terminal
115 to 122	P17 to P10	O	Not used (open)
123	MD0 (H)	I	Setting terminal for the CPU operational mode (fixed at “H” in this set)
124	MD1 (H)	I	Setting terminal for the CPU operational mode (fixed at “H” in this set)
125	MD2 (H)	I	Setting terminal for the CPU operational mode (fixed at “H” in this set)
126 to 128	PG0 to PG2	O	Not used (open)

SECTION 6 EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.

• Color Indication of Appearance Parts

Example:

KNOB, BALANCE (WHITE) . . . (RED)

↑ ↑
Parts Color Cabinet's Color

• Abbreviation

TYPE A : ENGLISH, SPANISH

TYPE B : ENGLISH, GERMAN

TYPE C : ENGLISH, FRENCH

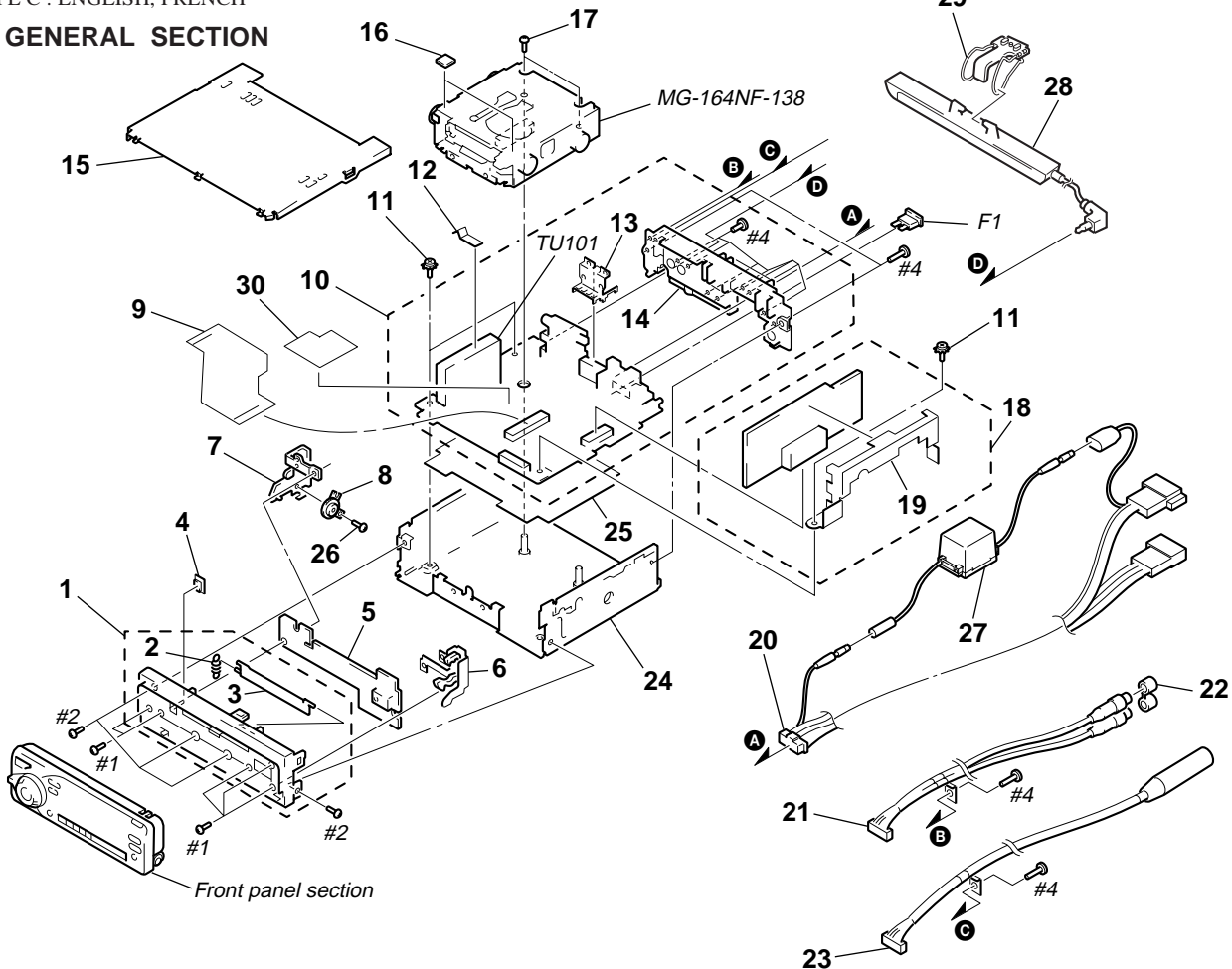
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- The mechanical parts with no reference number in the exploded views are not supplied.

- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

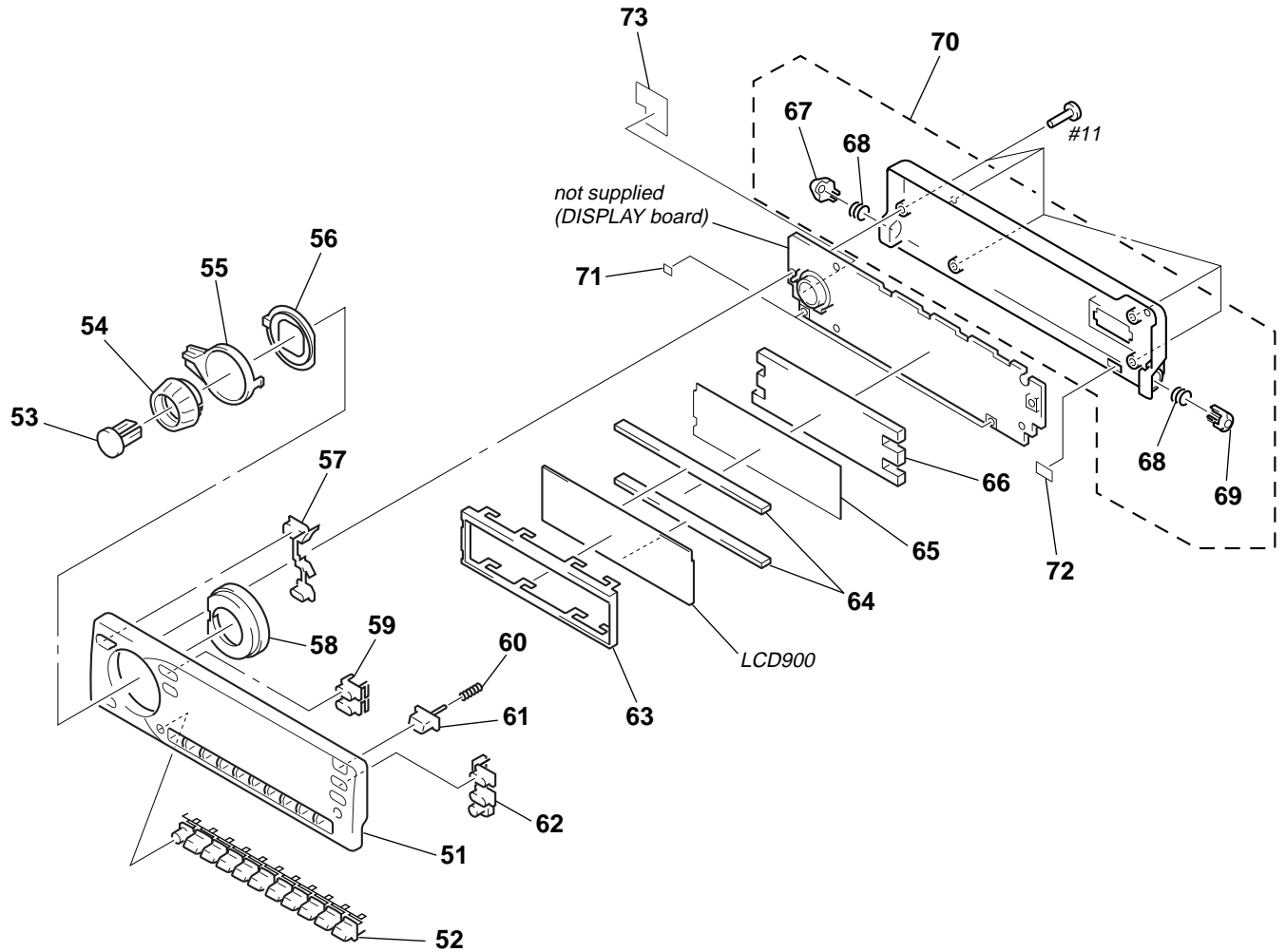
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

(1) GENERAL SECTION



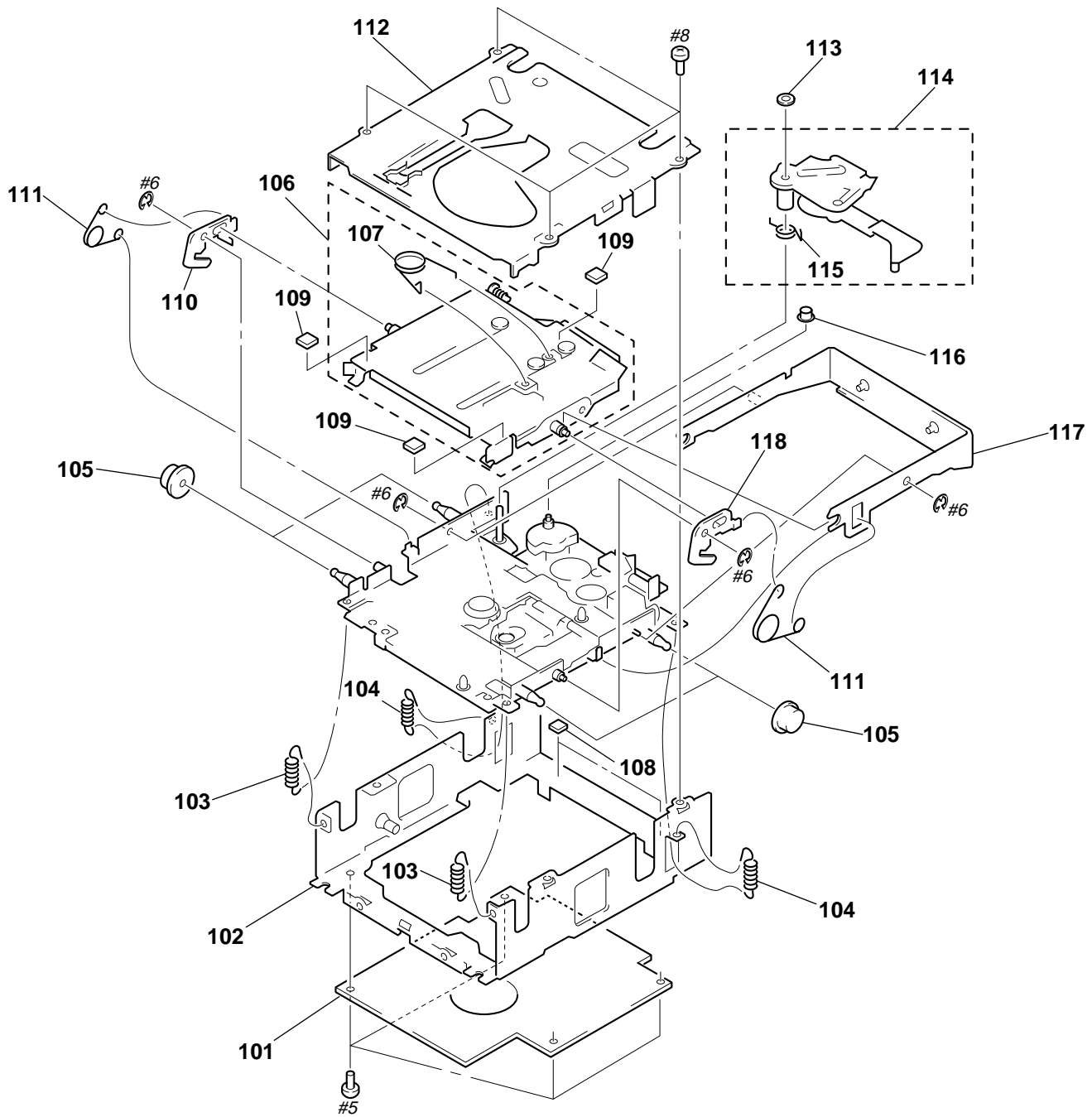
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-3377-562-1	PANEL ASSY, SUB		17	3-932-860-01	SCREW (2.6X4) (C TIGHT), +PTT	
2	3-025-484-01	SPRING (DOOR)		* 18	A-3294-728-A	POWER BOARD, COMPLETE (TYPE C)	
3	3-025-483-03	DOOR (MD)		* 18	A-3294-729-A	POWER BOARD, COMPLETE (TYPE A)	
4	3-022-338-01	BUTTON (EJECT) (Δ)		* 18	A-3294-735-A	POWER BOARD, COMPLETE (TYPE B)	
* 5	A-3294-736-A	RELAY BOARD, COMPLETE		* 19	3-036-995-01	BRACKET (POWER)	
6	X-3376-687-1	LOCK ASSY		20	1-776-527-71	CORD (WITH CONNECTOR) (ISO) (POWER)	
7	X-3375-066-1	BRACKET (GEAR) ASSY		21	1-790-355-21	CORD (WITH CONNECTOR) (RCA)	
8	3-030-909-02	DAMPER, OIL		22	3-339-410-01	COVER (2), PIN JACK	
9	1-674-594-11	FLEXIBLE BOARD		23	1-777-246-21	CORD (WITH CONNECTOR) (ANT)	
* 10	A-3317-859-A	MAIN BOARD, COMPLETE (TYPE A)		* 24	X-3377-555-2	CHASSIS ASSY	
* 10	A-3317-860-A	MAIN BOARD, COMPLETE (TYPE B)		* 25	3-036-998-01	SHEET, INSULATING	
* 10	A-3317-861-A	MAIN BOARD, COMPLETE (TYPE C)		26	3-713-786-51	SCREW +P 2X3	
11	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT		27	1-791-458-11	CABLE, POWER (WITH CHOKE COIL)	
12	3-360-123-01	PLATE (C), GROUND		28	1-475-982-11	UNIT (MICROPHONE)	
* 13	3-022-317-01	BRACKET (AMP)		29	X-3375-861-2	HOLDER (MIC) ASSY	
* 14	3-023-841-11	HEAT SINK		* 30	3-040-197-01	PLATE, SHIELD	
* 15	3-022-316-51	COVER		F1	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	
16	3-011-999-01	CUSHION (MD)		TU101	A-3282-045-A	TUNER UNIT (TUX-012 (E))	

(2) FRONT PANEL SECTION



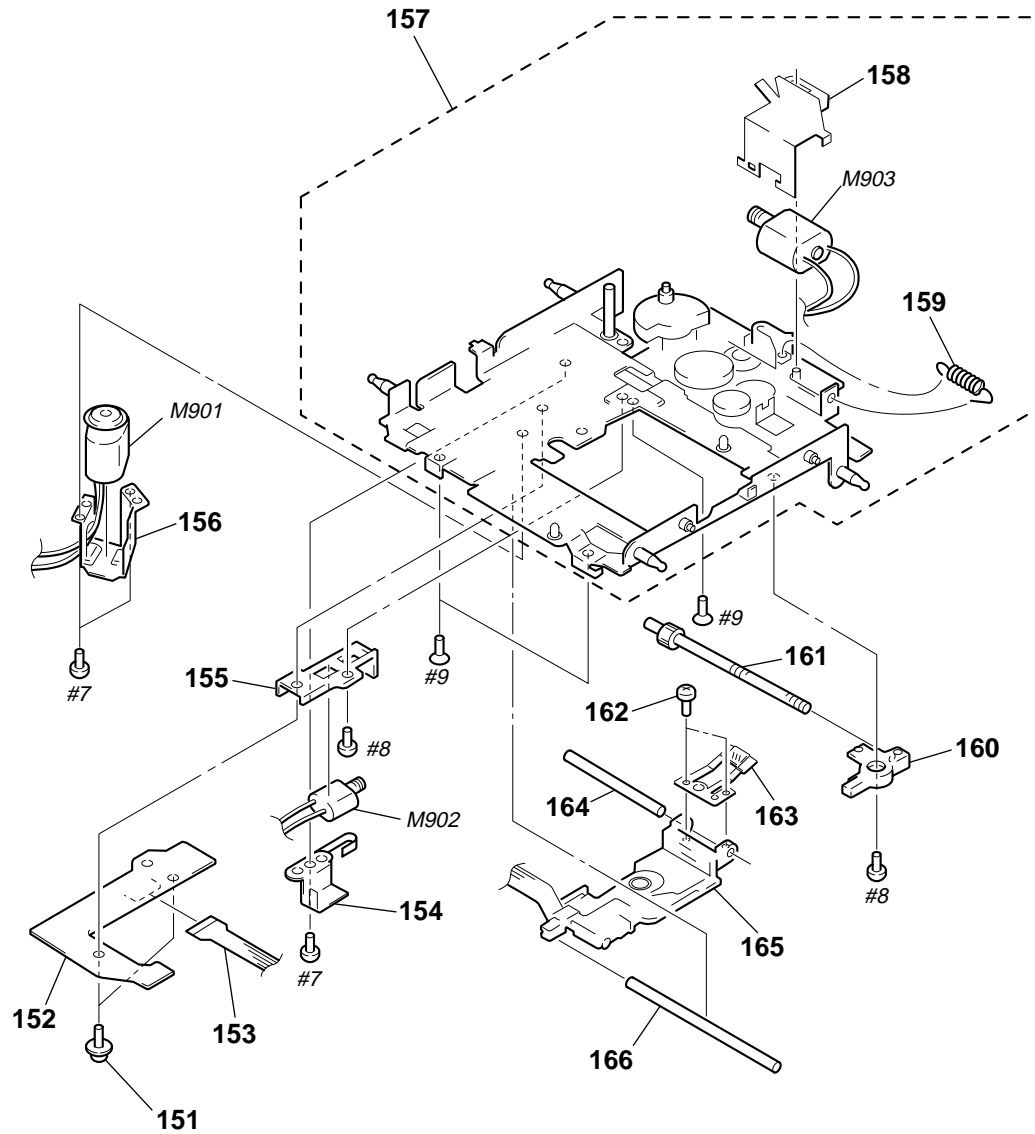
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	X-3377-559-1	PANEL SUB ASSY, FRONT		* 63	3-037-152-01	BRACKET (LCD)	
52	3-022-332-01	BUTTON (10 KEY) (SHIFT. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10)		64	1-694-414-11	CONDUCTOR BOARD, CONNECTION (RUBBER CONNECTOR)	
53	3-022-329-21	BUTTON (SOURCE)		* 65	3-037-000-01	SHEET, DIFFUSION	
54	3-033-667-02	KNOB (VOL)		* 66	3-037-669-01	PLATE (LCD), LIGHT GUIDE	
55	3-022-323-31	LEVER (SHUTTLE) (+ >>>> <<<< -. SEEK/AMS)		67	3-010-999-01	BEARING (L)	
56	3-022-324-02	PLATE (SHUTTLE), LIGHT GUIDE		68	3-010-998-01	SPRING (BEARING)	
57	3-022-330-11	BUTTON (MODE) (MODE. OFF)		69	3-010-999-01	BEARING (R)	
* 58	3-030-648-01	PLATE (RING), LIGHT GUIDE		70	X-3377-563-1	PANEL ASSY, FRONT BACK	
59	3-022-331-01	BUTTON (SOUND)		71	3-322-226-41	SPACER (A)	
60	3-935-151-01	SPRING (OPEN)		72	3-040-797-01	SPACER (S)	
61	3-022-333-01	BUTTON (OPEN)		73	3-040-798-01	SPACER (S2)	
62	3-022-308-01	BUTTON (PTY) (PTY. AF/TA. TIR)		LCD900	1-803-633-11	DISPLAY PANEL, LIQUID CRYSTAL	

(3) MECHANISM DECK SECTION-1
(MG-164NF-138)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 101	A-3317-836-A	SERVO BOARD, COMPLETE		* 110	3-032-712-01	LEVER (LOCK R)	
* 102	X-3376-799-1	CHASSIS ASSY, MD		111	3-919-281-01	SPRING (CHUCKING)	
103	3-032-714-01	SPRING (FLOAT F), TENSION		* 112	X-3376-800-1	COVER ASSY, MD	
104	3-921-111-01	SPRING (FLOAT B), TENSION		113	3-035-932-01	WASHER, STOPPER	
105	3-919-273-01	DAMPER, OIL		* 114	X-3376-797-3	LEVER (LE) ASSY	
* 106	X-3376-796-2	HOLDER ASSY		115	3-032-707-01	SPRING (LEVER LE)	
107	3-032-682-01	SPRING (HOLDER)		116	3-925-034-01	ROLLER (GEAR E)	
* 108	3-034-301-01	CUSHION (EJ2)		* 117	X-3376-798-1	ARM ASSY, CHUCKING	
* 109	3-034-302-01	CUSHION (EJ3)		* 118	3-032-711-01	LEVER (LOCK L)	

(4) MECHANISM DECK SECTION-2
(MG-164NF-138)



The components identified by mark \triangle or dotted line with mark \triangle are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	2-626-617-01	SCREW (2X8)		161	X-3373-213-1	SCREW ASSY, FEED	
152	A-3317-834-A	SENSOR BOARD, COMPLETE		162	3-939-590-07	SCREW (IB LOCK)	
153	1-654-693-11	SENSOR FLEXIBLE BOARD		163	3-010-091-01	SPRING (SL FEED)	
154	3-919-283-01	BRACKET (SL)		164	3-919-293-01	SHAFT (OPT S), GUIDE	
* 155	3-032-704-01	BASE (SL)		\triangle 165	8-583-046-05	OPTICAL PICK-UP KMS-241B/J1RP	
156	3-919-297-01	BRACKET (SP)		166	3-920-537-01	SHAFT (OPT L), GUIDE	
157	A-3301-750-A	CHASSIS (OP) ASSY		M901	A-3301-407-A	MOTOR ASSY, SP (SPINDLE)	
158	3-032-660-01	BRACKET (LO)		M902	A-3291-190-A	MOTOR ASSY, SL (SLED)	
159	3-032-669-01	SPRING (RACK), TENSION		M903	A-3291-191-A	MOTOR ASSY, LO (LOADING)	
* 160	3-032-705-01	BEARING (SL)					

DISPLAY

SECTION 7 ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable
- Abbreviation
TYPE A : ENGLISH, SPANISH
TYPE B : ENGLISH, GERMAN
TYPE C : ENGLISH, FRENCH

- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u: μ , for example:
uA. . : μ A. . uPA. . : μ PA. .
uPB. . : μ PB. . uPC. . : μ PC. .
uPD. . : μ PD. .
- CAPACITORS
uF: μ F
- COILS
uH: μ H

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
DISPLAY BOARD *****				< LED >			
	1-694-414-11	CONDUCTOR BOARD, CONNECTION (RUBBER CONNECTOR)		LED900	8-719-987-45	LED CL-155Y/PG-CD-TL (ILLUMINATION)	
				LED901	8-719-987-45	LED CL-155Y/PG-CD-TL (ILLUMINATION)	
				LED902	8-719-987-45	LED CL-155Y/PG-CD-TL (ILLUMINATION)	
*	3-037-000-01	SHEET, DIFFUSION		LED903	8-719-987-45	LED CL-155Y/PG-CD-TL (ILLUMINATION)	
*	3-037-152-01	BRACKET (LCD)		LED904	8-719-987-45	LED CL-155Y/PG-CD-TL (ILLUMINATION)	
*	3-037-669-01	PLATE (LCD), LIGHT GUIDE					
< CAPACITOR >				LED905	8-719-987-45	LED CL-155Y/PG-CD-TL (ILLUMINATION)	
C900	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V		LED906	8-719-033-13	LED CL-170Y-CD-T (ILLUMINATION)	
C901	1-107-823-11	CERAMIC CHIP 0.47uF 10% 16V		LED907	8-719-033-14	LED CL-170PG-CD-T (ILLUMINATION)	
C902	1-164-004-11	CERAMIC CHIP 0.1uF 10% 25V		LED971	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
C905	1-164-489-11	CERAMIC CHIP 0.22uF 10% 16V		LED972	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
C920	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V					
C921	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		LED973	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
C922	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		LED974	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
C958	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V		LED975	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
C959	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V		LED976	8-719-076-58	LED NSSW440-BRS (LCD BACK LIGHT)	
C960	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V		< SWITCH >			
				LSW900	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (OFF)	
				LSW901	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (SOURCE)	
				LSW902	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (SHIFT)	
				LSW903	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (MODE)	
				LSW904	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (SOUND)	
				LSW905	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (LIST, PTY)	
				LSW906	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (DSPL, SA)	
				LSW907	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (AF/TA)	
				LSW908	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (TIR)	
				LSW909	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (10)	
				LSW910	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (9)	
				LSW911	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (8)	
				LSW912	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (7)	
				LSW913	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (6)	
				LSW914	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (5)	
				LSW915	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (4)	
				LSW916	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (3)	
				LSW917	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (2)	
				LSW918	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (1)	
< CONNECTOR >				< TRANSISTOR >			
CN800	1-778-183-11	PLUG, CONNECTOR 18P		Q900	8-729-904-66	TRANSISTOR DTD113EK-T-146	
< DIODE >				Q901	8-729-904-66	TRANSISTOR DTD113EK-T-146	
D901	8-719-976-99	DIODE HZU5.1B2TRF		Q902	8-729-424-08	TRANSISTOR UN2111-TX	
D902	8-719-064-08	DIODE HZU6.8B2TRF		Q903	8-729-424-08	TRANSISTOR UN2111-TX	
D903	8-719-071-62	DIODE HZU3.3B2TRF		Q904	8-729-106-60	TRANSISTOR 2SB1132-T101-QR	
D905	8-719-017-62	DIODE MA8068-L-TX					
D971	8-719-071-59	DIODE HZU2.7B2TRF					
< IC >							
IC900	8-759-496-75	IC uPD16432BGC-018-9EU					
IC910	8-749-012-25	IC RS-170-TU					
IC920	8-759-580-20	IC uPD16431AGC-7ET					
IC921	8-759-075-66	IC TA75S01F (TE85L)					
< SHORT >							
JC901	1-216-295-00	SHORT 0					
< LIQUID CRYSTAL DISPLAY >							
LCD900	1-803-633-11	DISPLAY PANEL, LIQUID CRYSTAL					

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
Q971	8-729-120-28	TRANSISTOR	2SC2412K-T-146-QR			R957	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
Q972	8-729-106-60	TRANSISTOR	2SB1132-T101-QR								
		< RESISTOR >				R958	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
						R964	1-216-073-00	METAL CHIP	10K	5%	1/10W
R901	1-219-286-11	RES, CHIP	680	2%	1/16W	R965	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R902	1-219-286-11	RES, CHIP	680	2%	1/16W	R966	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R903	1-219-286-11	RES, CHIP	680	2%	1/16W	R969	1-218-713-11	METAL CHIP	7.5K	0.5%	1/16W
R904	1-218-847-11	RES, CHIP	1K	2%	1/16W						
R905	1-218-851-11	RES, CHIP	1.5K	2%	1/16W	R970	1-218-722-11	METAL CHIP	18K	0.5%	1/16W
						R971	1-216-049-11	METAL CHIP	1K	5%	1/10W
R906	1-218-851-11	RES, CHIP	1.5K	2%	1/16W	R972	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R907	1-216-647-11	METAL CHIP	680	0.5%	1/10W	R973	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R908	1-218-855-11	RES, CHIP	2.2K	2%	1/16W	R974	1-216-180-00	RES, CHIP	180	5%	1/8W
R909	1-219-286-11	RES, CHIP	680	2%	1/16W						
R910	1-219-286-11	RES, CHIP	680	2%	1/16W	R975	1-216-180-00	RES, CHIP	180	5%	1/8W
						R976	1-216-180-00	RES, CHIP	180	5%	1/8W
R911	1-218-847-11	RES, CHIP	1K	2%	1/16W	R977	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R912	1-218-851-11	RES, CHIP	1.5K	2%	1/16W	R978	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R913	1-218-851-11	RES, CHIP	1.5K	2%	1/16W	R979	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R914	1-218-855-11	RES, CHIP	2.2K	2%	1/16W						
R915	1-218-859-11	RES, CHIP	3.3K	2%	1/16W	R980	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
						R982	1-216-864-11	METAL CHIP	0	5%	1/16W
R916	1-218-863-11	RES, CHIP	4.7K	2%	1/16W	R983	1-218-825-11	METAL CHIP	2.2K	5%	1/16W
R917	1-218-867-11	RES, CHIP	6.8K	2%	1/16W	R984	1-216-049-11	METAL CHIP	1K	5%	1/10W
R918	1-218-871-11	RES, CHIP	10K	2%	1/16W			< ROTARY ENCODER >			
R919	1-218-875-11	RES, CHIP	15K	2%	1/16W						
R920	1-218-879-11	RES, CHIP	22K	2%	1/16W	RE900	1-475-014-11	ENCODER, ROTARY (VOLUME/BASS/TREBLE/ BALANCE/FADER CONTROL)			
R921	1-216-809-11	METAL CHIP	100	5%	1/16W			< SWITCH >			
R922	1-216-809-11	METAL CHIP	100	5%	1/16W						
R923	1-216-809-11	METAL CHIP	100	5%	1/16W						
R924	1-216-845-11	METAL CHIP	100K	5%	1/16W	S900	1-771-290-11	SWITCH, SLIDE (SEEK/AMS, ►►► ►► +, ◀◀◀ ◀◀◀ -)			
R925	1-216-841-11	METAL CHIP	47K	5%	1/16W			*****			
R926	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	*					
R927	1-216-823-11	METAL CHIP	1.5K	5%	1/16W		A-3317-859-A	MAIN BOARD, COMPLETE (TYPE A)			
R928	1-216-823-11	METAL CHIP	1.5K	5%	1/16W	*	A-3317-860-A	MAIN BOARD, COMPLETE (TYPE B)			
R929	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	*	A-3317-861-A	MAIN BOARD, COMPLETE (TYPE C)			
R931	1-216-033-00	METAL CHIP	220	5%	1/10W			*****			
R932	1-216-039-00	METAL CHIP	390	5%	1/10W	*					
R933	1-216-033-00	METAL CHIP	220	5%	1/10W		3-022-317-01	BRACKET (AMP)			
R934	1-216-821-11	METAL CHIP	1K	5%	1/16W		7-685-794-09	SCREW +PTT 2.6X10 (S)			
R935	1-216-033-00	METAL CHIP	220	5%	1/10W			< BUZZER >			
R936	1-216-033-00	METAL CHIP	220	5%	1/10W						
						BZ500	1-504-920-11	BUZZER			
R937	1-216-037-00	METAL CHIP	330	5%	1/10W						
R938	1-216-037-00	METAL CHIP	330	5%	1/10W			< CAPACITOR >			
R939	1-216-194-00	METAL CHIP	680	5%	1/8W						
R941	1-216-809-11	METAL CHIP	100	5%	1/16W	C101	1-165-319-11	CERAMIC CHIP	0.1uF		50V
R942	1-216-041-00	METAL CHIP	470	5%	1/10W	C102	1-117-681-11	ELECT CHIP	100uF	20%	16V
						C103	1-165-319-11	CERAMIC CHIP	0.1uF		50V
R943	1-216-025-00	RES, CHIP	100	5%	1/10W	C104	1-117-681-11	ELECT CHIP	100uF	20%	16V
R944	1-216-049-00	METAL CHIP	1K	5%	1/10W	C105	1-165-319-11	CERAMIC CHIP	0.1uF		50V
R945	1-216-829-11	METAL CHIP	4.7K	5%	1/16W						
R946	1-216-821-11	METAL CHIP	1K	5%	1/16W	C106	1-117-681-11	ELECT CHIP	100uF	20%	16V
R947	1-216-841-11	METAL CHIP	47K	5%	1/16W	C107	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
						C108	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
R948	1-216-841-11	METAL CHIP	47K	5%	1/16W	C109	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
R949	1-216-809-11	METAL CHIP	100	5%	1/16W	C110	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
R950	1-216-809-11	METAL CHIP	100	5%	1/16W						
R951	1-216-809-11	METAL CHIP	100	5%	1/16W	C112	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
R952	1-216-843-11	METAL CHIP	68K	5%	1/16W	C113	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
						C114	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
R953	1-216-821-11	METAL CHIP	1K	5%	1/16W	C115	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
R954	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	C131	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
R955	1-216-825-11	METAL CHIP	2.2K	5%	1/16W						
R956	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	C132	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C133	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C405	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C134	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C406	1-126-395-11	ELECT	22uF	20%	16V
C135	1-163-263-11	CERAMIC CHIP	330PF	5%	50V	C407	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C136	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V	C408	1-117-681-11	ELECT CHIP	100uF	20%	16V
C137	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C409	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C138	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V	C410	1-124-779-00	ELECT CHIP	10uF	20%	16V
C139	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V	C422	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C140	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C423	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C151	1-104-913-11	TANTALUM CHIP	10uF	20%	16V	C424	1-117-681-11	ELECT CHIP	100uF	20%	16V
C152	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C425	1-126-204-11	ELECT CHIP	47uF	20%	16V
C153	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	C431	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C154	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	C441	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C155	1-104-913-11	TANTALUM CHIP	10uF	20%	16V	C463	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C156	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C464	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C157	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C465	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C158	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	C466	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C159	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C467	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C161	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C468	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C162	1-164-315-11	CERAMIC CHIP	470PF	5%	50V	C471	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C164	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V	C472	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C165	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V	C473	1-117-681-11	ELECT CHIP	100uF	20%	16V
C167	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V	C474	1-164-346-11	CERAMIC CHIP	1uF		16V
C168	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V	C475	1-126-395-11	ELECT	22uF	20%	16V
C169	1-164-344-11	CERAMIC CHIP	0.068uF	10%	25V	C477	1-115-469-11	ELECT	4700uF	99%	16V
C170	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V	C479	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C171	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C481	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C181	1-126-204-11	ELECT CHIP	47uF	20%	16V	C482	1-126-204-11	ELECT CHIP	47uF	20%	16V
C182	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C483	1-126-197-11	ELECT CHIP	10uF	20%	50V
C254	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C485	1-127-820-11	CERAMIC	4.7uF		16V
C271	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C486	1-127-820-11	CERAMIC	4.7uF		16V
C272	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C487	1-127-820-11	CERAMIC	4.7uF		16V
C291	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	C488	1-127-820-11	CERAMIC	4.7uF		16V
C292	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	C489	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C293	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V	C490	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C301	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C491	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C314	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C492	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C316	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C501	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C319	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C502	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C320	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C503	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C321	1-126-246-11	ELECT CHIP	220uF	20%	4V	C504	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C323	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	C505	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C324	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	C506	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C327	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C510	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C328	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C511	1-125-565-11	DOUBLE LAYER	0.22F		5.5V
C329	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C512	1-125-565-11	DOUBLE LAYER	0.22F		5.5V
C333	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	C513	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C334	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C514	1-163-017-00	CERAMIC CHIP	0.0047uF	10%	50V
C335	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C535	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C336	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C557	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C337	1-104-851-11	TANTALUM CHIP	10uF	20%	10V	C562	1-125-817-11	CERAMIC CHIP	10uF	10%	6.3V
C338	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	C601	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C339	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C602	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C341	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C603	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C353	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C604	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C401	1-117-681-11	ELECT CHIP	100uF	20%	16V	C605	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C402	1-126-246-11	ELECT CHIP	220uF	20%	4V	C606	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C403	1-117-681-11	ELECT CHIP	100uF	20%	16V	C607	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C404	1-117-681-11	ELECT CHIP	100uF	20%	16V						

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
C608	1-115-412-11	CERAMIC CHIP	680PF	5%	25V	C683	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C609	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V						
C611	1-124-779-00	ELECT CHIP	10uF	20%	16V	C684	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C612	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C685	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
						C691	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C613	1-164-506-11	CERAMIC CHIP	4.7uF		16V	C696	1-124-779-00	ELECT CHIP	10uF	20%	16V
C615	1-126-204-11	ELECT CHIP	47uF	20%	16V	C701	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C616	1-164-506-11	CERAMIC CHIP	4.7uF		16V						
C617	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	C703	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C618	1-117-681-11	ELECT CHIP	100uF	20%	16V	C704	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
						C705	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C619	1-117-681-11	ELECT CHIP	100uF	20%	16V	C706	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C620	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	C707	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C621	1-124-779-00	ELECT CHIP	10uF	20%	16V						
C622	1-124-779-00	ELECT CHIP	10uF	20%	16V	C751	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C623	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C752	1-164-505-11	CERAMIC CHIP	2.2uF		16V
						C753	1-164-700-11	CERAMIC CHIP	0.68uF		16V
C624	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C754	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C626	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C755	1-163-037-11	CERAMIC CHIP	0.022uF	10%	50V
C631	1-164-506-11	CERAMIC CHIP	4.7uF		16V						
C632	1-164-506-11	CERAMIC CHIP	4.7uF		16V	C756	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C633	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	C757	1-115-185-11	CERAMIC CHIP	0.033uF	10%	50V
						C771	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C634	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	C772	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C635	1-115-412-11	CERAMIC CHIP	680PF	5%	25V	C773	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C636	1-115-412-11	CERAMIC CHIP	680PF	5%	25V						
C637	1-115-412-11	CERAMIC CHIP	680PF	5%	25V	C774	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C638	1-115-412-11	CERAMIC CHIP	680PF	5%	25V	C782	1-104-913-11	TANTALUM CHIP	10uF	20%	16V
						C784	1-119-751-11	TANTALUM CHIP	22uF	20%	16V
C639	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V	C785	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C641	1-124-779-00	ELECT CHIP	10uF	20%	16V	C786	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C642	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V						
C643	1-164-506-11	CERAMIC CHIP	4.7uF		16V	C787	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C645	1-126-204-11	ELECT CHIP	47uF	20%	16V	C788	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
						C789	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C646	1-164-506-11	CERAMIC CHIP	4.7uF		16V	C796	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C647	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	C797	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C648	1-117-681-11	ELECT CHIP	100uF	20%	16V						
C649	1-117-681-11	ELECT CHIP	100uF	20%	16V	C798	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C650	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	C799	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
						C901	1-125-817-11	CERAMIC CHIP	10uF	10%	6.3V
C651	1-124-779-00	ELECT CHIP	10uF	20%	16V	C903	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C652	1-124-779-00	ELECT CHIP	10uF	20%	16V	C904	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C653	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V						
C654	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C905	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C656	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C906	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
						C909	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C657	1-163-243-11	CERAMIC CHIP	47PF	5%	50V	C910	1-104-913-11	TANTALUM CHIP	10uF	20%	16V
C658	1-163-243-11	CERAMIC CHIP	47PF	5%	50V	C911	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C659	1-163-243-11	CERAMIC CHIP	47PF	5%	50V						
C660	1-163-243-11	CERAMIC CHIP	47PF	5%	50V	C912	1-164-739-11	CERAMIC CHIP	560PF	5%	50V
C661	1-164-506-11	CERAMIC CHIP	4.7uF		16V	C913	1-164-505-11	CERAMIC CHIP	2.2uF		16V
						C914	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C662	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V	C915	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C664	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V	C951	1-125-817-11	CERAMIC CHIP	10uF	10%	6.3V
C665	1-163-137-00	CERAMIC CHIP	680PF	5%	50V						
C666	1-163-137-00	CERAMIC CHIP	680PF	5%	50V	C952	1-125-817-11	CERAMIC CHIP	10uF	10%	6.3V
C669	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C953	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
						C954	1-115-185-11	CERAMIC CHIP	0.033uF	10%	50V
C670	1-163-235-11	CERAMIC CHIP	22PF	5%	50V	C955	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C672	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C956	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C673	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V						
C674	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V	C957	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C675	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V	C958	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
						C959	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C676	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V	< CONNECTOR/JACK >					
C677	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V						
C681	1-164-506-11	CERAMIC CHIP	4.7uF		16V	* CN101	1-506-984-11	PIN, CONNECTOR (PC BOARD) 2P			
C682	1-164-506-11	CERAMIC CHIP	4.7uF		16V						

MAIN

Ref. No.	Part No.	Description	Remark
* CN202	1-764-441-21	CONNECTOR, FPC 30P	
CN251	1-770-410-11	CONNECTOR, BOARD TO BOARD 18P	
CN271	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)	
* CN291	1-564-506-11	PLUG, CONNECTOR 3P	
CN401	1-779-823-21	CONNECTOR, BOARD TO BOARD 30P	
CNJ252	1-691-258-21	JACK (MIC)	
CNJ272	1-566-822-41	JACK (REMOTE IN)	
CNP401	1-774-701-11	PIN, CONNECTOR 16P (POWER)	
CNP601	1-774-700-21	JACK, PIN 6P (LINE OUT FRONT, LINE OUT REAR, BUS AUDIO IN)	
< COMPOSITION CIRCUIT BLOCK >			
CP101	1-803-335-21	ABSORBER, CHIP SURGE	
< DIODE >			
D131	8-719-941-23	DIODE DA204UT106	
D181	8-719-047-98	DIODE HZU5.6B2TRF	
D204	8-719-914-44	DIODE DAP202K-T-146	
D251	8-719-071-71	DIODE HZU8.2B2TRF	
D252	8-719-071-71	DIODE HZU8.2B2TRF	
D253	8-719-071-71	DIODE HZU8.2B2TRF	
D254	8-719-914-44	DIODE DAP202K-T-146	
D255	8-719-071-71	DIODE HZU8.2B2TRF	
D256	8-719-071-71	DIODE HZU8.2B2TRF	
D257	8-719-071-71	DIODE HZU8.2B2TRF	
D258	8-719-071-71	DIODE HZU8.2B2TRF	
D259	8-719-071-71	DIODE HZU8.2B2TRF	
D260	8-719-071-71	DIODE HZU8.2B2TRF	
D261	8-719-071-71	DIODE HZU8.2B2TRF	
D262	8-719-071-71	DIODE HZU8.2B2TRF	
D263	8-719-071-25	DIODE HZU18B2TRF	
D264	8-719-071-25	DIODE HZU18B2TRF	
D265	8-719-071-25	DIODE HZU18B2TRF	
D271	8-719-938-75	DIODE SB05-05CP-TB	
D272	8-719-064-08	DIODE HZU6.8B2TRF	
D273	8-719-071-25	DIODE HZU18B2TRF	
D274	8-719-071-25	DIODE HZU18B2TRF	
D275	8-719-064-03	DIODE HZU16B2TRF	
D276	8-719-105-99	DIODE HZU6.2B2TRF	
D277	8-719-073-01	DIODE MA111-TX	
D278	8-719-073-01	DIODE MA111-TX	
D279	8-719-071-71	DIODE HZU8.2B2TRF	
D280	8-719-071-71	DIODE HZU8.2B2TRF	
D282	8-719-073-01	DIODE MA111-TX	
D283	8-719-073-01	DIODE MA111-TX	
D291	8-719-941-23	DIODE DA204UT106	
D403	8-719-914-43	DIODE DAN202K-T-146	
D421	8-719-977-03	DIODE MA8056-H-TX	
D422	8-719-981-59	DIODE FC805-TL	
D423	8-719-938-75	DIODE SB05-05CP-TB	
D424	8-719-981-59	DIODE FC805-TL	
D431	8-719-064-08	DIODE HZU6.8B2TRF	
D432	8-719-914-43	DIODE DAN202K-T-146	
D441	8-719-914-43	DIODE DAN202K-T-146	
D442	8-719-064-08	DIODE HZU6.8B2TRF	
D461	8-719-420-51	DIODE MA729	
D462	8-719-071-25	DIODE HZU18B2TRF	
D463	8-719-071-25	DIODE HZU18B2TRF	

Ref. No.	Part No.	Description	Remark
D464	8-719-071-25	DIODE	HZU18B2TRF
D466	8-719-071-25	DIODE	HZU18B2TRF
D467	8-719-053-18	DIODE	1SR154-400TE-25
D468	8-719-053-18	DIODE	1SR154-400TE-25
D471	8-719-073-01	DIODE	MA111-TX
D472	8-719-073-01	DIODE	MA111-TX
D477	8-719-049-38	DIODE	1N5404TU
D481	8-719-076-95	DIODE	PTZ-TE25-18B
D482	8-719-076-95	DIODE	PTZ-TE25-18B
D483	8-719-076-95	DIODE	PTZ-TE25-18B
D484	8-719-076-95	DIODE	PTZ-TE25-18B
D485	8-719-076-95	DIODE	PTZ-TE25-18B
D486	8-719-076-95	DIODE	PTZ-TE25-18B
D487	8-719-076-95	DIODE	PTZ-TE25-18B
D488	8-719-076-95	DIODE	PTZ-TE25-18B
D489	8-719-064-03	DIODE	HZU16B2TRF
D491	8-719-062-37	DIODE	HZU3.9B1TRF
D527	8-719-073-01	DIODE	MA111-TX
D546	8-719-071-71	DIODE	HZU8.2B2TRF
D555	8-719-976-99	DIODE	HZU5.1B2TRF
D601	8-719-941-23	DIODE	DA204UT106
D631	8-719-941-23	DIODE	DA204UT106
D661	8-719-941-23	DIODE	DA204UT106
D701	8-719-073-01	DIODE	MA111-TX
D702	8-719-073-01	DIODE	MA111-TX
D751	8-719-062-37	DIODE	HZU3.9B1TRF
< FERRITE BEAD/SHORT >			
FB201	1-216-295-00	SHORT	0
FB202	1-216-295-00	SHORT	0
FB203	1-216-295-00	SHORT	0
FB204	1-500-240-22	FERRITE	0uH
FB205	1-500-240-22	FERRITE	0uH
FB206	1-500-240-22	FERRITE	0uH
FB301	1-500-241-22	FERRITE	0uH
FB302	1-216-295-00	SHORT	0
FB303	1-500-240-22	FERRITE	0uH
FB305	1-500-240-22	FERRITE	0uH
FB401	1-216-295-00	SHORT	0
FB402	1-500-240-22	FERRITE	0uH
FB901	1-500-241-22	FERRITE	0uH
< IC >			
IC131	8-759-422-21	IC	NJM4580V (TE2)
IC151	8-759-586-54	IC	TDA7427ADTR
IC271	8-759-593-98	IC	BA8270FV-E2
IC300	8-752-395-98	IC	CXD2727Q
IC351	8-759-524-05	IC	TC74VHC126FT (EL)
IC401	8-759-710-88	IC	NJM431U-TE2
IC402	8-759-643-48	IC	BA00ASFP-E2
IC403	8-759-476-23	IC	BA08SFP-E2
IC404	8-759-460-72	IC	BA033FP-E2
IC421	8-759-525-98	IC	RN5VL45CA-TL
IC481	8-759-486-44	IC	TDA7386
IC500	8-759-593-50	IC	MB90574APMT-G-215-BND
IC506	8-759-571-49	IC	XC61AN4102PR
IC601	8-759-385-17	IC	NJM4580E (TE2)
IC602	8-759-594-52	IC	LM1973MX

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
IC603	8-759-394-84	IC NJM072BM-TE2		Q274	8-729-120-28	TRANSISTOR	2SC2412K-T-146-QR
IC604	8-759-593-97	IC NJM2160AM-TE2		Q275	8-729-028-91	TRANSISTOR	DTA144EUA-T106
IC631	8-759-385-17	IC NJM4580E (TE2)		Q401	8-729-920-85	TRANSISTOR	2SD1664-T101-QR
IC632	8-759-594-52	IC LM1973MX		Q402	8-729-106-60	TRANSISTOR	2SB1132-T101-QR
IC633	8-759-394-84	IC NJM072BM-TE2		Q403	1-801-806-11	TRANSISTOR	DTC144EK-T146
IC634	8-759-593-97	IC NJM2160AM-TE2		Q421	8-729-822-84	TRANSISTOR	2SB1202FAT-TL
IC661	8-759-385-17	IC NJM4580E (TE2)		Q422	8-729-230-49	TRANSISTOR	2SC2712-YG-TE85L
IC663	8-759-394-84	IC NJM072BM-TE2		Q423	1-801-806-11	TRANSISTOR	DTC144EK-T146
IC691	8-759-488-29	IC TC7W66FU (TE12L)		Q424	1-801-806-11	TRANSISTOR	DTC144EK-T146
IC701	8-759-593-99	IC HD6432355A08F		Q431	8-729-120-28	TRANSISTOR	2SC2412K-T-146-QR
IC702	8-759-277-63	IC TC7W14FU (TE12R)		Q441	8-729-905-35	TRANSISTOR	2SC4081T106R
IC752	8-759-488-29	IC TC7W66FU (TE12L)		Q451	8-729-905-35	TRANSISTOR	2SC4081T106R
IC771	8-759-473-80	IC BA3131FS-E2		Q461	8-729-049-13	TRANSISTOR	UPA1853GR-9JG-E1
IC901	8-759-492-59	IC SAA6588T-118		Q462	8-729-429-92	TRANSISTOR	XN1211-TX
IC951	8-759-374-66	IC MSM6688GS-2K		Q471	8-729-901-21	TRANSISTOR	DTC144EK-T146
IC952	8-759-180-46	IC MSM6685JSDR1		Q472	8-729-026-53	TRANSISTOR	2SA1576A-T106-QR
< SHORT >				Q473	8-729-921-25	TRANSISTOR	FMC2-T148
JC100	1-216-295-00	SHORT	0	Q474	8-729-921-25	TRANSISTOR	FMC2-T148
JC101	1-216-295-00	SHORT	0	Q501	8-729-028-91	TRANSISTOR	DTA144EUA-T106
JC103	1-216-296-00	SHORT	0	Q504	8-729-901-21	TRANSISTOR	DTC144EK-T106
JC251	1-216-295-00	SHORT	0	Q523	8-729-024-31	TRANSISTOR	XN1111-TX
JC300	1-216-295-00	SHORT	0	Q601	8-729-400-56	TRANSISTOR	2SD1328-T-TX
JC901	1-216-296-00	SHORT	0	Q602	8-729-400-56	TRANSISTOR	2SD1328-T-TX
< COIL >				Q631	8-729-400-56	TRANSISTOR	2SD1328-T-TX
L181	1-412-060-11	INDUCTOR CHIP	22uH	Q632	8-729-400-56	TRANSISTOR	2SD1328-T-TX
L401	1-412-058-11	INDUCTOR CHIP	10uH	Q661	8-729-400-56	TRANSISTOR	2SD1328-T-TX
L402	1-412-054-21	INDUCTOR CHIP	2.2uH	Q662	8-729-400-56	TRANSISTOR	2SD1328-T-TX
L403	1-412-054-21	INDUCTOR CHIP	2.2uH	Q691	8-729-029-14	TRANSISTOR	DTC144EUA-T106
L404	1-412-058-11	INDUCTOR CHIP	10uH	Q751	8-729-921-25	TRANSISTOR	FMC2-T148
L506	1-412-060-11	INDUCTOR CHIP	22uH	Q752	8-729-047-71	TRANSISTOR	FMG12-T-148
L701	1-412-060-11	INDUCTOR CHIP	22uH	Q753	8-729-920-21	TRANSISTOR	DTC314TK-T-146
L901	1-412-058-11	INDUCTOR CHIP	10uH	Q754	8-729-429-92	TRANSISTOR	XN1211-TX
L951	1-412-060-11	INDUCTOR CHIP	22uH	Q901	8-729-921-25	TRANSISTOR	FMC2-T148
L952	1-412-060-11	INDUCTOR CHIP	22uH	< RESISTOR >			
< TRANSISTOR >				R101	1-216-025-00	RES, CHIP	100 5% 1/10W
Q130	8-729-905-35	TRANSISTOR	2SC4081T106R	R102	1-216-037-00	METAL CHIP	330 5% 1/10W
Q131	8-729-029-14	TRANSISTOR	DTC144EUA-T106	R104	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q132	8-729-921-25	TRANSISTOR	FMC2-T148	R105	1-216-081-00	METAL CHIP	22K 5% 1/10W
Q133	8-729-905-35	TRANSISTOR	2SC4081T106R	R106	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
Q134	8-729-029-14	TRANSISTOR	DTC144EUA-T106	R111	1-216-296-00	SHORT	0
Q180	8-729-904-63	TRANSISTOR	DTB123YK-T-146	R114	1-216-864-11	METAL CHIP	0 5% 1/16W
Q181	8-729-029-14	TRANSISTOR	DTC144EUA-T106	R124	1-216-037-00	METAL CHIP	330 5% 1/10W
Q182	8-729-904-63	TRANSISTOR	DTB123YK-T-146	R131	1-216-845-11	METAL CHIP	100K 5% 1/16W
Q183	8-729-029-14	TRANSISTOR	DTC144EUA-T106	R132	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
Q185	8-729-920-85	TRANSISTOR	2SD1664-T101-QR	R133	1-216-821-11	METAL CHIP	1K 5% 1/16W
Q251	8-729-025-48	TRANSISTOR	XN4381-TX	R135	1-216-833-11	RES, CHIP	10K 5% 1/16W
Q252	8-729-025-48	TRANSISTOR	XN4381-TX	R136	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
Q253	1-801-806-11	TRANSISTOR	DTC144EK-T146	R137	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
Q254	8-729-026-53	TRANSISTOR	2SA1576A-T106-QR	R138	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
Q255	8-729-905-35	TRANSISTOR	2SC4081T106R	R139	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
Q256	8-729-106-60	TRANSISTOR	2SB1132-T101-QR	R140	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
Q271	1-801-806-11	TRANSISTOR	DTC144EK-T146	R141	1-216-845-11	METAL CHIP	100K 5% 1/16W
Q272	8-729-028-91	TRANSISTOR	DTA144EUA-T106	R142	1-216-121-00	RES, CHIP	1M 5% 1/10W
Q273	8-729-120-28	TRANSISTOR	2SC2412K-T-146-QR	R143	1-216-025-00	RES, CHIP	100 5% 1/10W
				R151	1-216-017-00	RES, CHIP	47 5% 1/10W
				R153	1-216-001-00	METAL CHIP	10 5% 1/10W

MAIN

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R154	1-216-813-11	METAL CHIP	220	5%	1/16W	R405	1-216-045-00	METAL CHIP	680	5%	1/10W
R155	1-216-813-11	METAL CHIP	220	5%	1/16W	R406	1-216-065-00	RES, CHIP	4.7K	5%	1/10W
R157	1-216-025-00	RES, CHIP	100	5%	1/10W	R408	1-216-295-00	SHORT	0		
R158	1-216-073-00	METAL CHIP	10K	5%	1/10W	R411	1-216-295-00	SHORT	0		
R159	1-216-073-00	METAL CHIP	10K	5%	1/10W	R421	1-216-089-00	RES, CHIP	47K	5%	1/10W
R160	1-216-097-00	RES, CHIP	100K	5%	1/10W	R422	1-216-680-11	METAL CHIP	16K	0.5%	1/10W
R161	1-216-077-00	RES, CHIP	15K	5%	1/10W	R423	1-216-661-11	METAL CHIP	2.7K	0.5%	1/10W
R162	1-216-083-00	METAL CHIP	27K	5%	1/10W	R430	1-216-821-11	METAL CHIP	1K	5%	1/16W
R181	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R431	1-216-081-00	METAL CHIP	22K	5%	1/10W
R182	1-216-065-00	RES, CHIP	4.7K	5%	1/10W	R432	1-216-081-00	METAL CHIP	22K	5%	1/10W
R202	1-216-295-00	SHORT	0			R434	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R251	1-218-710-11	RES, CHIP	5.6K	0.5%	1/16W	R441	1-216-839-11	METAL CHIP	33K	5%	1/16W
R252	1-218-704-11	METAL CHIP	3.3K	0.5%	1/16W	R442	1-216-841-11	METAL CHIP	47K	5%	1/16W
R253	1-216-845-11	METAL CHIP	100K	5%	1/16W	R443	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R254	1-216-049-11	RES, CHIP	1K	5%	1/10W	R444	1-216-841-11	METAL CHIP	47K	5%	1/16W
R255	1-216-025-00	RES, CHIP	100	5%	1/10W	R451	1-216-833-11	RES, CHIP	10K	5%	1/16W
R256	1-216-025-00	RES, CHIP	100	5%	1/10W	R452	1-216-833-11	RES, CHIP	10K	5%	1/16W
R257	1-216-833-11	RES, CHIP	10K	5%	1/16W	R453	1-216-845-11	METAL CHIP	100K	5%	1/16W
R258	1-216-833-11	RES, CHIP	10K	5%	1/16W	R454	1-216-839-11	METAL CHIP	33K	5%	1/16W
R259	1-208-462-41	RES, CHIP	10K	2%	1/10W	R461	1-216-073-00	METAL CHIP	10K	5%	1/10W
R260	1-208-462-41	RES, CHIP	10K	2%	1/10W	R462	1-216-073-00	METAL CHIP	10K	5%	1/10W
R261	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R463	1-216-073-00	METAL CHIP	10K	5%	1/10W
R262	1-216-049-11	RES, CHIP	1K	5%	1/10W	R464	1-216-073-00	METAL CHIP	10K	5%	1/10W
R263	1-216-049-11	RES, CHIP	1K	5%	1/10W	R466	1-216-833-11	RES, CHIP	10K	5%	1/16W
R264	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	R471	1-216-073-00	METAL CHIP	10K	5%	1/10W
R265	1-216-041-00	METAL CHIP	470	5%	1/10W	R472	1-216-833-11	RES, CHIP	10K	5%	1/16W
R271	1-216-001-00	METAL CHIP	10	5%	1/10W	R473	1-216-809-11	RES, CHIP	100	5%	1/16W
R272	1-216-073-00	METAL CHIP	10K	5%	1/10W	R474	1-216-821-11	METAL CHIP	1K	5%	1/16W
R273	1-216-025-00	RES, CHIP	100	5%	1/10W	R475	1-216-837-11	METAL CHIP	22K	5%	1/16W
R274	1-216-025-00	RES, CHIP	100	5%	1/10W	R476	1-216-821-11	METAL CHIP	1K	5%	1/16W
R275	1-216-841-11	METAL CHIP	47K	5%	1/16W	R477	1-216-049-11	RES, CHIP	1K	5%	1/10W
R276	1-216-841-11	METAL CHIP	47K	5%	1/16W	R478	1-216-845-11	METAL CHIP	100K	5%	1/16W
R277	1-216-845-11	METAL CHIP	100K	5%	1/16W	R479	1-216-833-11	RES, CHIP	10K	5%	1/16W
R278	1-216-845-11	METAL CHIP	100K	5%	1/16W	R481	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R279	1-216-025-00	RES, CHIP	100	5%	1/10W	R482	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R280	1-216-025-00	RES, CHIP	100	5%	1/10W	R483	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R281	1-208-462-41	RES, CHIP	10K	2%	1/10W	R484	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R282	1-208-462-41	RES, CHIP	10K	2%	1/10W	R485	1-216-837-11	METAL CHIP	22K	5%	1/16W
R283	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R486	1-216-837-11	METAL CHIP	22K	5%	1/16W
R285	1-216-841-11	METAL CHIP	47K	5%	1/16W	R487	1-216-837-11	METAL CHIP	22K	5%	1/16W
R291	1-218-732-11	METAL CHIP	47K	0.5%	1/16W	R488	1-216-837-11	METAL CHIP	22K	5%	1/16W
R292	1-218-732-11	METAL CHIP	47K	0.5%	1/16W	R501	1-216-097-00	RES, CHIP	100K	5%	1/10W
R293	1-216-627-11	METAL CHIP	100	0.5%	1/10W	R502	1-216-821-11	METAL CHIP	1K	5%	1/16W
R294	1-216-627-11	METAL CHIP	100	0.5%	1/10W	R503	1-216-864-11	METAL CHIP	0	5%	1/16W
R331	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	R505	1-216-097-00	RES, CHIP	100K	5%	1/10W
R333	1-216-129-00	METAL CHIP	2.2M	5%	1/10W	R506	1-216-813-11	METAL CHIP	220	5%	1/16W
R334	1-216-821-11	METAL CHIP	1K	5%	1/16W	R509	1-216-033-00	METAL CHIP	220	5%	1/10W
R335	1-216-821-11	METAL CHIP	1K	5%	1/16W	R510	1-216-097-00	RES, CHIP	100K	5%	1/10W
R337	1-216-821-11	METAL CHIP	1K	5%	1/16W	R512	1-216-845-11	METAL CHIP	100K	5%	1/16W
R341	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	R513	1-216-295-00	SHORT	0		
R342	1-216-089-00	RES, CHIP	47K	5%	1/10W	R514	1-216-033-00	METAL CHIP	220	5%	1/10W
R352	1-216-295-00	SHORT	0			R515	1-216-033-00	METAL CHIP	220	5%	1/10W
R353	1-216-295-00	SHORT	0			R516	1-216-813-11	METAL CHIP	220	5%	1/16W
R354	1-216-295-00	SHORT	0			R517	1-216-813-11	METAL CHIP	220	5%	1/16W
R401	1-216-033-00	METAL CHIP	220	5%	1/10W	R519	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R402	1-216-045-00	METAL CHIP	680	5%	1/10W	R520	1-216-097-00	RES, CHIP	100K	5%	1/10W
R403	1-216-033-00	METAL CHIP	220	5%	1/10W	R521	1-216-845-11	METAL CHIP	100K	5%	1/16W
R404	1-216-041-00	METAL CHIP	470	5%	1/10W						

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R522	1-216-097-00	RES, CHIP	100K	5%	1/10W	R629	1-216-833-11	RES, CHIP	10K	5%	1/16W
R524	1-216-295-00	SHORT	0			R630	1-216-833-11	RES, CHIP	10K	5%	1/16W
R525	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R631	1-218-711-11	METAL CHIP	6.2K	0.5%	1/16W
R526	1-216-097-00	RES, CHIP	100K	5%	1/10W	R632	1-216-073-00	METAL CHIP	10K	5%	1/10W
R528	1-216-295-00	SHORT	0								
						R633	1-216-089-00	RES, CHIP	47K	5%	1/10W (TYPE C)
R529	1-216-813-11	METAL CHIP	220	5%	1/16W						
R530	1-216-033-00	METAL CHIP	220	5%	1/10W	R633	1-216-841-11	METAL CHIP	47K	5%	1/16W (TYPE A/B)
R531	1-216-813-11	METAL CHIP	220	5%	1/16W						
R548	1-216-839-11	METAL CHIP	33K	5%	1/16W (TYPE A/C)	R634	1-218-711-11	METAL CHIP	6.2K	0.5%	1/16W
						R635	1-216-073-00	METAL CHIP	10K	5%	1/10W
R548	1-216-841-11	METAL CHIP	47K	5%	1/16W (TYPE B)	R636	1-216-089-00	RES, CHIP	47K	5%	1/10W (TYPE C)
R551	1-216-845-11	METAL CHIP	100K	5%	1/16W (TYPE A/C)	R636	1-216-841-11	METAL CHIP	47K	5%	1/16W (TYPE A/B)
R551	1-216-841-11	METAL CHIP	47K	5%	1/16W (TYPE B)						
R585	1-216-839-11	METAL CHIP	33K	5%	1/16W (TYPE B)	R637	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
						R638	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W
R585	1-216-841-11	METAL CHIP	47K	5%	1/16W (TYPE A)	R639	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
						R640	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W
R585	1-216-845-11	METAL CHIP	100K	5%	1/16W (TYPE C)						
						R642	1-202-926-11	RES, CHIP	36K	5%	1/16W
R587	1-216-097-00	RES, CHIP	100K	5%	1/10W	R643	1-218-293-11	RES, CHIP	24K	5%	1/16W
R591	1-216-839-11	METAL CHIP	33K	5%	1/16W (TYPE C)	R644	1-218-293-11	RES, CHIP	24K	5%	1/16W
						R645	1-202-926-11	RES, CHIP	36K	5%	1/16W
R591	1-216-841-11	METAL CHIP	47K	5%	1/16W (TYPE A)	R646	1-216-833-11	RES, CHIP	10K	5%	1/16W
R591	1-216-845-11	METAL CHIP	100K	5%	1/16W (TYPE B)	R647	1-216-833-11	RES, CHIP	10K	5%	1/16W
						R648	1-216-033-00	METAL CHIP	220	5%	1/10W
R595	1-216-049-11	RES, CHIP	1K	5%	1/10W	R649	1-216-049-11	RES, CHIP	1K	5%	1/10W
						R650	1-216-049-11	RES, CHIP	1K	5%	1/10W
R601	1-218-711-11	METAL CHIP	6.2K	0.5%	1/16W	R651	1-216-033-00	METAL CHIP	220	5%	1/10W
R602	1-216-073-00	METAL CHIP	10K	5%	1/10W						
R603	1-216-089-00	RES, CHIP	47K	5%	1/10W (TYPE C)	R652	1-216-081-00	METAL CHIP	22K	5%	1/10W
						R653	1-216-081-00	METAL CHIP	22K	5%	1/10W
R603	1-216-841-11	METAL CHIP	47K	5%	1/16W (TYPE A/B)	R657	1-216-073-00	METAL CHIP	10K	5%	1/10W
						R658	1-216-073-00	METAL CHIP	10K	5%	1/10W
R604	1-218-711-11	METAL CHIP	6.2K	0.5%	1/16W	R661	1-216-073-00	METAL CHIP	10K	5%	1/10W
R605	1-216-073-00	METAL CHIP	10K	5%	1/10W	R662	1-216-073-00	METAL CHIP	10K	5%	1/10W
R606	1-216-089-00	RES, CHIP	47K	5%	1/10W (TYPE C)	R663	1-216-089-00	RES, CHIP	47K	5%	1/10W
						R667	1-218-720-11	METAL CHIP	15K	0.5%	1/16W
R606	1-216-841-11	METAL CHIP	47K	5%	1/16W (TYPE A/B)	R668	1-216-689-11	METAL CHIP	39K	0.5%	1/10W (TYPE B)
R607	1-216-675-11	METAL CHIP	10K	0.5%	1/10W	R668	1-218-730-11	METAL CHIP	39K	0.5%	1/16W (TYPE A/C)
R608	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W						
						R669	1-218-720-11	METAL CHIP	15K	0.5%	1/16W
R609	1-216-675-11	METAL CHIP	10K	0.5%	1/10W	R670	1-218-730-11	METAL CHIP	39K	0.5%	1/16W
R610	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W	R678	1-216-033-00	METAL CHIP	220	5%	1/10W
R612	1-202-926-11	RES, CHIP	36K	5%	1/16W	R679	1-216-049-11	RES, CHIP	1K	5%	1/10W
R613	1-218-293-11	RES, CHIP	24K	5%	1/16W	R680	1-216-049-11	RES, CHIP	1K	5%	1/10W
R614	1-218-293-11	RES, CHIP	24K	5%	1/16W						
						R681	1-216-033-00	METAL CHIP	220	5%	1/10W
R615	1-202-926-11	RES, CHIP	36K	5%	1/16W	R682	1-216-081-00	METAL CHIP	22K	5%	1/10W
R616	1-216-833-11	RES, CHIP	10K	5%	1/16W	R683	1-216-081-00	METAL CHIP	22K	5%	1/10W
R617	1-216-833-11	RES, CHIP	10K	5%	1/16W	R691	1-216-833-11	RES, CHIP	10K	5%	1/16W
R618	1-216-033-00	METAL CHIP	220	5%	1/10W	R692	1-216-833-11	RES, CHIP	10K	5%	1/16W
R619	1-216-049-11	RES, CHIP	1K	5%	1/10W						
						R693	1-216-841-11	METAL CHIP	47K	5%	1/16W
R620	1-216-049-11	RES, CHIP	1K	5%	1/10W	R695	1-216-845-11	METAL CHIP	100K	5%	1/16W
R621	1-216-033-00	METAL CHIP	220	5%	1/10W	R696	1-216-097-00	RES, CHIP	100K	5%	1/10W
R622	1-216-081-00	METAL CHIP	22K	5%	1/10W	R701	1-216-845-11	METAL CHIP	100K	5%	1/16W
R623	1-216-081-00	METAL CHIP	22K	5%	1/10W	R702	1-216-845-11	METAL CHIP	100K	5%	1/16W
R627	1-216-833-11	RES, CHIP	10K	5%	1/16W						
						R703	1-216-845-11	METAL CHIP	100K	5%	1/16W
R628	1-216-833-11	RES, CHIP	10K	5%	1/16W	R704	1-216-033-00	METAL CHIP	220	5%	1/10W
						R705	1-216-033-00	METAL CHIP	220	5%	1/10W
						R706	1-216-033-00	METAL CHIP	220	5%	1/10W

MAIN

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R707	1-216-025-00	RES, CHIP	100	5%	1/10W	R799	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W
R709	1-216-041-00	METAL CHIP	470	5%	1/10W	R901	1-216-113-00	METAL CHIP	470K	5%	1/10W
R710	1-216-033-00	METAL CHIP	220	5%	1/10W	R902	1-216-821-11	METAL CHIP	1K	5%	1/16W
R711	1-216-097-00	RES, CHIP	100K	5%	1/10W	R903	1-216-077-00	RES, CHIP	15K	5%	1/10W
R713	1-216-809-11	METAL CHIP	100	5%	1/16W	R904	1-216-861-11	METAL CHIP	2.2M	5%	1/16W
R714	1-216-864-11	METAL CHIP	0	5%	1/16W	R905	1-216-817-11	METAL CHIP	470	5%	1/16W
R715	1-216-845-11	METAL CHIP	100K	5%	1/16W	R906	1-216-813-11	METAL CHIP	220	5%	1/16W
R717	1-216-845-11	METAL CHIP	100K	5%	1/16W	R907	1-216-813-11	METAL CHIP	220	5%	1/16W
R718	1-216-845-11	METAL CHIP	100K	5%	1/16W	R951	1-216-097-00	RES, CHIP	100K	5%	1/10W
R720	1-216-097-00	RES, CHIP	100K	5%	1/10W	R952	1-216-097-00	RES, CHIP	100K	5%	1/10W
R721	1-216-057-00	RES, CHIP	2.2K	5%	1/10W	R953	1-216-097-00	RES, CHIP	100K	5%	1/10W
R751	1-216-813-11	METAL CHIP	220	5%	1/16W	R954	1-216-105-00	RES, CHIP	220K	5%	1/10W
R752	1-216-813-11	METAL CHIP	220	5%	1/16W	R955	1-216-089-00	METAL CHIP	47K	5%	1/10W
R753	1-216-081-00	METAL CHIP	22K	5%	1/10W	R956	1-216-097-00	RES, CHIP	100K	5%	1/10W
R754	1-216-081-00	METAL CHIP	22K	5%	1/10W	R957	1-216-073-11	RES, CHIP	10K	5%	1/10W
R756	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	R958	1-216-025-00	RES, CHIP	100	5%	1/10W
R757	1-216-081-00	METAL CHIP	22K	5%	1/10W	R959	1-216-025-00	RES, CHIP	100	5%	1/10W
R758	1-216-049-11	RES, CHIP	1K	5%	1/10W	R960	1-216-295-00	SHORT	0		
R759	1-216-065-00	RES, CHIP	4.7K	5%	1/10W	R961	1-216-025-00	RES, CHIP	100	5%	1/10W
R760	1-216-841-11	METAL CHIP	47K	5%	1/16W	R962	1-216-049-11	RES, CHIP	1K	5%	1/10W
R761	1-216-841-11	METAL CHIP	47K	5%	1/16W	R963	1-216-845-11	METAL CHIP	100K	5%	1/16W
R762	1-216-841-11	METAL CHIP	47K	5%	1/16W	R964	1-216-845-11	METAL CHIP	100K	5%	1/16W
R763	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	R965	1-216-025-00	RES, CHIP	100	5%	1/10W
R764	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	R966	1-216-025-00	RES, CHIP	100	5%	1/10W
R771	1-218-732-11	METAL CHIP	47K	0.5%	1/16W	R967	1-216-025-00	RES, CHIP	100	5%	1/10W
R772	1-218-732-11	METAL CHIP	47K	0.5%	1/16W	R968	1-216-025-00	RES, CHIP	100	5%	1/10W
R773	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W	R969	1-216-025-00	RES, CHIP	100	5%	1/10W
R773	1-218-712-11	METAL CHIP	6.8K	0.5%	1/16W (TYPE A/C) (TYPE B)	R970	1-216-809-11	METAL CHIP	100	5%	1/16W
R774	1-218-712-11	METAL CHIP	6.8K	0.5%	1/16W (TYPE A/C)	R971	1-216-809-11	METAL CHIP	100	5%	1/16W
R774	1-218-728-11	METAL CHIP	33K	0.5%	1/16W (TYPE B)	R972	1-216-025-00	RES, CHIP	100	5%	1/10W
R775	1-218-704-11	METAL CHIP	3.3K	0.5%	1/16W	R973	1-216-025-00	RES, CHIP	100	5%	1/10W
R776	1-218-706-11	METAL CHIP	3.9K	0.5%	1/16W	R974	1-216-097-00	RES, CHIP	100K	5%	1/10W
R777	1-218-724-11	METAL CHIP	22K	0.5%	1/16W	R975	1-216-097-00	RES, CHIP	100K	5%	1/10W
R778	1-218-712-11	METAL CHIP	6.8K	0.5%	1/16W	R976	1-216-097-00	RES, CHIP	100K	5%	1/10W
R779	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W (TYPE A/C)	R977	1-216-097-00	RES, CHIP	100K	5%	1/10W
R779	1-218-712-11	METAL CHIP	6.8K	0.5%	1/16W (TYPE B)	< COMPOSITION CIRCUIT BLOCK >					
R780	1-218-712-11	METAL CHIP	6.8K	0.5%	1/16W (TYPE A/C)	RB251	1-233-412-11	RES, CHIP NETWORK 1K (3216)			
R780	1-218-728-11	METAL CHIP	33K	0.5%	1/16W (TYPE B)	RB252	1-233-412-11	RES, CHIP NETWORK 1K (3216)			
R781	1-218-732-11	METAL CHIP	47K	0.5%	1/16W	RB301	1-233-578-11	RES, CHIP NETWORK 47K			
R782	1-218-704-11	METAL CHIP	3.3K	0.5%	1/16W	RB502	1-233-412-11	RES, CHIP NETWORK 1K (3216)			
R783	1-218-706-11	METAL CHIP	3.9K	0.5%	1/16W	RB504	1-216-182-00	RES, CHIP NETWORK 220 (3216)			
R784	1-218-724-11	METAL CHIP	22K	0.5%	1/16W	RB505	1-233-412-11	RES, CHIP NETWORK 1K (3216)			
R785	1-218-712-11	METAL CHIP	6.8K	0.5%	1/16W	RB507	1-216-182-00	RES, CHIP NETWORK 220 (3216)			
R786	1-218-732-11	METAL CHIP	47K	0.5%	1/16W	RB508	1-216-182-00	RES, CHIP NETWORK 220 (3216)			
R787	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W	RB509	1-216-182-00	RES, CHIP NETWORK 220 (3216)			
R788	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W	< VARIABLE RESISTOR >					
R789	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W	RV131	1-238-718-11	RES, ADJ, METAL GLAZE 470K			
R791	1-208-795-11	RES, CHIP	3.6K	2%	1/10W	< SWITCH >					
R792	1-208-795-11	RES, CHIP	3.6K	2%	1/10W	S500	1-762-108-31	SWITCH, PUSH (1 KEY) (NOSE DETECT)			
R797	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W	< THERMISTOR >					
R798	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W	TH271	1-801-792-21	THERMISTOR, POSITIVE			
						TH461	1-803-615-21	THERMISTOR, POSITIVE			
						TH462	1-803-615-21	THERMISTOR, POSITIVE			

Ref. No.	Part No.	Description	Remark		
< TUNER UNIT >					
TU101	A-3282-045-A	TUNER UNIT (TUX-012 (E))			
< VIBRATOR >					
X151	1-781-361-21	VIBRATOR, CRYSTAL (10.25MHz)			
X300	1-767-408-21	VIBRATOR, CRYSTAL (16.9344MHz)			
X500	1-781-660-21	VIBRATOR, CERAMIC (3.58MHz)			
X501	1-760-928-21	VIBRATOR, CRYSTAL (32.768kHz)			
X701	1-781-030-21	VIBRATOR, CRYSTAL (18.432MHz)			
X901	1-781-536-11	VIBRATOR, CRYSTAL (4.332MHz)			
X951	1-579-843-11	VIBRATOR, CRYSTAL (4.19MHz)			

*	A-3294-728-A	POWER BOARD, COMPLETE (TYPE C)			
*	A-3294-729-A	POWER BOARD, COMPLETE (TYPE A)			
*	A-3294-735-A	POWER BOARD, COMPLETE (TYPE B)	*****		
*	3-036-995-01	BRACKET (POWER)			
< CAPACITOR >					
C801	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C802	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C803	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C804	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C805	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C806	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C807	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C808	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C809	1-104-913-11	TANTALUM CHIP	10uF	20%	16V
C810	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C811	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C812	1-104-913-11	TANTALUM CHIP	10uF	20%	16V
C813	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C814	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C815	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C816	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C817	1-104-913-11	TANTALUM CHIP	10uF	20%	16V
C818	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C841	1-125-817-11	CERAMIC CHIP	10uF	10%	6.3V
C842	1-115-340-11	CERAMIC CHIP	0.22uF	10%	25V
C844	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C845	1-164-690-11	CERAMIC CHIP	0.0022uF	5%	50V
C846	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C847	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C848	1-164-690-11	CERAMIC CHIP	0.0022uF	5%	50V
C849	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C850	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C851	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C852	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C853	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C854	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C855	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C856	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C857	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C858	1-104-913-11	TANTALUM CHIP	10uF	20%	16V
C859	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V

Ref. No.	Part No.	Description	Remark		
C860	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C861	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C862	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C863	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C864	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C865	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C866	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C871	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C872	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C873	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C874	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C875	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C876	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C877	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C878	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C879	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C880	1-128-975-11	CAPACITOR	22uF		20V
C881	1-128-975-11	CAPACITOR	22uF		20V
C882	1-126-200-11	ELECT CHIP	10uF	20%	35V
C883	1-117-681-11	ELECT CHIP	100uF	20%	16V
C887	1-126-204-11	ELECT CHIP	47uF	20%	16V
C888	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C890	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C891	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
< CONNECTOR >					
CN801	1-779-821-11	CONNECTOR, BOARD TO BOARD 30P			
< DIODE >					
D841	8-719-064-08	DIODE	HZU6.8B2TRF		
D842	8-719-047-98	DIODE	HZU5.6B2TRF		
D871	8-719-055-30	DIODE	D1FS4A-TA		
D872	8-719-054-47	DIODE	D3FS4A-TA		
D891	8-719-976-96	DIODE	MA8047-H-TX		
D892	8-719-420-51	DIODE	MA729-TX		
< FERRITE BEAD >					
FB801	1-500-245-11	FERRITE	0uH		
FB802	1-500-245-11	FERRITE	0uH		
FB803	1-500-245-11	FERRITE	0uH		
FB804	1-500-245-11	FERRITE	0uH		
FB805	1-500-245-11	FERRITE	0uH		
FB806	1-469-312-21	ARRAY, FERRITE CHIP			
FB807	1-469-312-21	ARRAY, FERRITE CHIP			
< IC >					
IC801	8-759-538-27	IC	RSC-164		
IC802	8-759-523-81	IC	TC74VHC08FT (EL)		
IC803	8-759-639-73	IC	MSM534001E-49TSKFDR3 (TYPE C)		
IC803	8-759-639-74	IC	MSM534001E-50TSKFDR3 (TYPE A)		
IC803	8-759-639-75	IC	MSM534001E-51TSKFDR3 (TYPE B)		
IC804	8-759-058-64	IC	TC7S32FU-TE85L		
IC805	8-759-534-72	IC	MBM29F800TA		
IC841	8-759-338-78	IC	BA10324AFV-E2		
IC843	8-759-100-96	IC	NJM4558M-T2		
IC871	8-759-990-43	IC	TL1451ACDB-E20		

POWER

Ref. No.	Part No.	Description	Remark
< SHORT >			
JC841	1-216-295-00	SHORT 0	
< COIL >			
L801	1-412-060-11	INDUCTOR CHIP 22uH	
L802	1-412-058-11	INDUCTOR CHIP 10uH	
L841	1-412-058-11	INDUCTOR CHIP 10uH	
L842	1-412-058-11	INDUCTOR CHIP 10uH	
L871	1-414-408-11	INDUCTOR CHIP 1uH	
L872	1-411-499-11	INDUCTOR 47uH	
L873	1-412-054-21	INDUCTOR CHIP 2.2uH	
L874	1-411-499-11	INDUCTOR 47uH	
L875	1-412-054-21	INDUCTOR CHIP 2.2uH	
< TRANSISTOR >			
Q801	8-729-904-63	TRANSISTOR DTB123YK-T-146	
Q802	8-729-029-14	TRANSISTOR DTC144EUA-T106	
Q841	8-729-920-85	TRANSISTOR 2SD1664-T101-QR	
Q881	8-729-921-25	TRANSISTOR FMC2-T148	
Q882	8-729-026-59	TRANSISTOR FMY1A-T148	
Q883	8-729-039-28	TRANSISTOR HAT1026R-EL	
Q884	8-729-822-84	TRANSISTOR 2SB1202FAT-TL	
Q886	8-729-049-13	TRANSISTOR UPA1853GR-9JG-E1	
Q887	8-729-429-92	TRANSISTOR XN1211-TX	
Q890	1-801-806-11	TRANSISTOR DTC144EK-T146	
< RESISTOR >			
R801	1-216-864-11	METAL CHIP 0 5% 1/16W	
R802	1-216-295-00	SHORT 0	
R803	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R804	1-216-025-00	RES, CHIP 100 5% 1/10W	
R805	1-216-025-00	RES, CHIP 100 5% 1/10W	
R806	1-216-295-00	SHORT 0	
R807	1-216-295-00	SHORT 0	
R808	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R809	1-216-298-00	METAL CHIP 2.2 5% 1/10W	
R810	1-216-109-00	METAL CHIP 330K 5% 1/10W	
R811	1-216-109-00	METAL CHIP 330K 5% 1/10W	
R812	1-216-097-00	RES, CHIP 100K 5% 1/10W	
R813	1-216-001-00	METAL CHIP 10 5% 1/10W	
R814	1-216-809-11	METAL CHIP 100 5% 1/16W	
R815	1-216-809-11	METAL CHIP 100 5% 1/16W	
R816	1-216-809-11	METAL CHIP 100 5% 1/16W	
R817	1-216-809-11	METAL CHIP 100 5% 1/16W	
R818	1-216-809-11	METAL CHIP 100 5% 1/16W	
R819	1-216-049-11	RES, CHIP 1K 5% 1/10W	
R820	1-216-089-00	RES, CHIP 47K 5% 1/10W	
R821	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R822	1-216-826-11	METAL CHIP 2.7K 5% 1/16W	
R841	1-216-025-00	RES, CHIP 100 5% 1/10W	
R842	1-216-049-11	RES, CHIP 1K 5% 1/10W	
R843	1-216-025-00	RES, CHIP 100 5% 1/10W	
R844	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R845	1-216-093-11	RES, CHIP 68K 5% 1/10W	
R846	1-216-823-11	METAL CHIP 1.5K 5% 1/16W	
R847	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R848	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	

Ref. No.	Part No.	Description	Remark
R849	1-216-855-11	METAL CHIP 680K 5% 1/16W	
R850	1-216-091-00	METAL CHIP 56K 5% 1/10W	
R851	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R852	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R853	1-216-830-11	METAL CHIP 5.6K 5% 1/16W	
R854	1-216-833-11	RES, CHIP 10K 5% 1/16W	
R855	1-218-294-11	RES, CHIP 30K 5% 1/16W	
R856	1-216-835-11	METAL CHIP 15K 5% 1/16W	
R857	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R858	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R859	1-216-833-11	RES, CHIP 10K 5% 1/16W	
R860	1-218-294-11	RES, CHIP 30K 5% 1/16W	
R861	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R862	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R863	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R864	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R865	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R866	1-216-833-11	RES, CHIP 10K 5% 1/16W	
R867	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R868	1-216-049-11	RES, CHIP 1K 5% 1/10W	
R869	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R871	1-216-033-00	RES, CHIP 220 5% 1/10W	
R872	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R873	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R874	1-208-445-41	RES, CHIP 2.2K 2% 1/10W	
R875	1-208-811-11	RES, CHIP 16K 2% 1/10W	
R876	1-216-651-11	METAL CHIP 1K 0.5% 1/10W	
R877	1-216-663-11	METAL CHIP 3.3K 0.5% 1/10W	
R878	1-216-295-00	SHORT 0	
R881	1-216-077-00	RES, CHIP 15K 5% 1/10W	
R882	1-208-811-11	METAL CHIP 16K 0.5% 1/10W	
R883	1-216-077-00	RES, CHIP 15K 5% 1/10W	
R884	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R885	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R886	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R887	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R888	1-216-039-00	METAL CHIP 390 5% 1/10W	
R889	1-216-051-00	METAL CHIP 1.2K 5% 1/10W	
R890	1-216-813-11	METAL CHIP 220 5% 1/16W	
R891	1-216-815-11	METAL CHIP 330 5% 1/16W	
R892	1-216-833-11	RES, CHIP 10K 5% 1/16W	
R893	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R895	1-218-738-11	RES, CHIP 82K 0.5% 1/16W	
R896	1-216-829-11	RES, CHIP 4.7K 5% 1/16W	
R897	1-216-845-11	RES, CHIP 100K 5% 1/16W	
< COMPOSITION CIRCUIT BLOCK >			
RB801	1-233-576-11	RES, CHIP NETWORK 100	
RB802	1-233-576-11	RES, CHIP NETWORK 100	
RB803	1-233-576-11	RES, CHIP NETWORK 100	
RB804	1-233-576-11	RES, CHIP NETWORK 100	
RB805	1-233-576-11	RES, CHIP NETWORK 100	
RB806	1-233-576-11	RES, CHIP NETWORK 100	
< VIBRATOR >			
X801	1-781-090-21	VIBRATOR, CRYSTAL (14.318MHz)	

RELAY

SENSOR

SERVO

Ref. No.	Part No.	Description	Remark			
*	A-3294-736-A	RELAY BOARD, COMPLETE	*****			
< CAPACITOR >						
C701	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C702	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C705	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	
C706	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	
< CONNECTOR >						
CN701	1-793-290-11	SOCKET, CONNECTOR 18P				
CN702	1-779-169-11	SOCKET, CONNECTOR 18P				
< DIODE >						
D701	8-719-056-84	DIODE HZU7.5B2TRF				
D702	8-719-056-84	DIODE HZU7.5B2TRF				
D703	8-719-056-84	DIODE HZU7.5B2TRF				
D704	8-719-056-84	DIODE HZU7.5B2TRF				
D705	8-719-056-84	DIODE HZU7.5B2TRF				
D706	8-719-056-84	DIODE HZU7.5B2TRF				
D707	8-719-071-25	DIODE HZU18B2TRF				
< LED >						
LED705	8-719-051-01	LED CL-170HR-CD-T (TIR)				
LED706	8-719-064-72	LED BG1101F-10-TR (MD DISC SLOT)				
< SWITCH >						
LSW702	1-771-703-11	SWITCH, KEYBOARD (WITH LED) (▲)				
< RESISTOR >						
R701	1-216-033-00	METAL CHIP	220	5%	1/10W	
R709	1-216-295-00	SHORT	0			
< SWITCH >						
S703	1-572-921-11	SWITCH, KEY BOARD (RESET)				

A-3317-834-A		SENSOR BOARD, COMPLETE	*****			
For the parts on the SENSOR board, replace the entire mounted board.						

*	A-3317-836-A	SERVO BOARD, COMPLETE	*****			
< CAPACITOR >						
C11	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C301	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C302	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C305	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C306	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V	
C307	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C308	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	
C309	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	
C310	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V	
C311	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V	
C314	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	

Ref. No.	Part No.	Description	Remark			
C315	1-109-982-11	CERAMIC CHIP	1uF	10%	10V	
C316	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C317	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C318	1-104-852-11	TANTALUM CHIP	22uF	20%	6.3V	
C319	1-104-852-11	TANTALUM CHIP	22uF	20%	6.3V	
C320	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V	
C321	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V	
C322	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C324	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C325	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V	
C326	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	
C327	1-109-982-11	CERAMIC CHIP	1uF	10%	10V	
C328	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	
C329	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V	
C330	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C331	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C333	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C334	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C335	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C336	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C337	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C338	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C339	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C342	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C343	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C344	1-104-852-11	TANTALUM CHIP	22uF	20%	6.3V	
C345	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C346	1-104-852-11	TANTALUM CHIP	22uF	20%	6.3V	
C347	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C348	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C349	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C350	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C351	1-104-852-11	TANTALUM CHIP	22uF	20%	10V	
C352	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C353	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C356	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	
C357	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	
C358	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	
C359	1-162-923-11	CERAMIC CHIP	47PF	5%	50V	
C361	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V	
C362	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C402	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C403	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C501	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	
C503	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C504	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C505	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C506	1-104-852-11	TANTALUM CHIP	22uF	20%	10V	
C510	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V	
C511	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C512	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C513	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C514	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V	
C515	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
C516	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	

SERVO

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark			
< CONNECTOR >						R325	1-216-821-11	METAL CHIP	1K	5%	1/16W	
CN101	1-764-441-21	CONNECTOR, FPC 30P				R327	1-216-821-11	METAL CHIP	1K	5%	1/16W	
CN102	1-573-929-21	CONNECTOR, FFC/FPC (ZIF) 20P				R328	1-216-811-11	METAL CHIP	150	5%	1/16W	
CN103	1-764-439-21	CONNECTOR, FPC 11P				R329	1-216-819-11	METAL CHIP	680	5%	1/16W	
< DIODE >						R330	1-216-853-11	METAL CHIP	470K	5%	1/16W	
D401	8-719-157-93	DIODE DTZ-TT11-3.0B				R331	1-216-809-11	METAL CHIP	100	5%	1/16W	
D501	8-719-988-61	DIODE 1SS355TE-17				R332	1-216-809-11	METAL CHIP	100	5%	1/16W	
< FERRITE BEAD >						R333	1-216-819-11	METAL CHIP	680	5%	1/16W	
FB302	1-414-760-21	FERRITE 0uH				R334	1-216-809-11	METAL CHIP	100	5%	1/16W	
< IC >						R335	1-216-815-11	METAL CHIP	330	5%	1/16W	
IC301	8-752-384-47	IC CXD2652AR				R336	1-216-853-11	METAL CHIP	470K	5%	1/16W	
IC302	8-752-080-95	IC CXA2523AR				R337	1-216-853-11	METAL CHIP	470K	5%	1/16W	
IC303	8-759-430-25	IC BH6511FS-E2				R338	1-216-833-11	RES, CHIP	10K	5%	1/16W	
IC304	8-759-096-87	IC TC7WU04FU (TE12R)				R339	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
IC305	8-759-040-83	IC BA6287F-T1				R340	1-216-843-11	METAL CHIP	68K	5%	1/16W	
IC306	8-759-058-62	IC TC7S08FU (TE85R)				R341	1-216-837-11	METAL CHIP	22K	5%	1/16W	
IC307	8-759-368-16	IC MN41V4400TT-08S				R342	1-216-833-11	RES, CHIP	10K	5%	1/16W	
IC401	8-759-909-71	IC BA4558F-E2				R343	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
IC501	8-752-908-41	IC CXP84340-216Q				R344	1-216-833-11	RES, CHIP	10K	5%	1/16W	
IC502	8-759-238-47	IC TC74HCT7007AF (EL)				R345	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	
IC503	8-759-238-47	IC TC74HCT7007AF (EL)				R346	1-216-841-11	METAL CHIP	47K	5%	1/16W	
< COIL >						R347	1-216-833-11	RES, CHIP	10K	5%	1/16W	
L301	1-412-058-11	INDUCTOR CHIP 10uH				R348	1-218-708-11	METAL CHIP	4.7K	0.5%	1/16W	
L302	1-412-058-11	INDUCTOR CHIP 10uH				R349	1-216-025-00	RES, CHIP	100	5%	1/10W	
L303	1-412-039-51	INDUCTOR CHIP 100uH				R350	1-216-142-00	RES, CHIP	4.7	5%	1/8W	
L304	1-412-039-51	INDUCTOR CHIP 100uH				R351	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W	
L305	1-412-039-51	INDUCTOR CHIP 100uH				R352	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W	
L306	1-412-039-51	INDUCTOR CHIP 100uH				R353	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W	
L501	1-412-058-11	INDUCTOR CHIP 10uH				R354	1-216-857-11	METAL CHIP	1M	5%	1/16W	
< TRANSISTOR >						R355	1-216-833-11	RES, CHIP	10K	5%	1/16W	
Q301	8-729-230-49	TRANSISTOR 2SC2712Y-TE85L				R356	1-216-833-11	RES, CHIP	10K	5%	1/16W	
Q302	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR				R357	1-216-017-00	RES, CHIP	47	5%	1/10W	
Q401	8-729-920-85	TRANSISTOR 2SD1664-T101-QR				R358	1-216-864-11	METAL CHIP	0	5%	1/16W	
Q402	8-729-106-60	TRANSISTOR 2SB1132-T101-QR				R401	1-216-073-00	METAL CHIP	10K	5%	1/10W	
Q403	8-729-421-22	TRANSISTOR UN2211-TX				R402	1-216-065-00	RES, CHIP	4.7K	5%	1/10W	
< RESISTOR >						R403	1-216-065-00	RES, CHIP	4.7K	5%	1/10W	
R301	1-216-809-11	METAL CHIP 100 5%	1/16W				R404	1-216-809-11	METAL CHIP	100	5%	1/16W
R302	1-216-809-11	METAL CHIP 100 5%	1/16W				R405	1-218-692-11	METAL CHIP	1K	0.5%	1/16W
R303	1-216-809-11	METAL CHIP 100 5%	1/16W				R406	1-218-714-11	METAL CHIP	8.2K	0.5%	1/16W
R304	1-216-809-11	METAL CHIP 100 5%	1/16W				R501	1-216-821-11	METAL CHIP	1K	5%	1/16W
R305	1-216-809-11	METAL CHIP 100 5%	1/16W				R502	1-216-821-11	METAL CHIP	1K	5%	1/16W
R306	1-216-809-11	METAL CHIP 100 5%	1/16W				R503	1-216-821-11	METAL CHIP	1K	5%	1/16W
R307	1-216-809-11	METAL CHIP 100 5%	1/16W				R504	1-216-821-11	METAL CHIP	1K	5%	1/16W
R308	1-216-809-11	METAL CHIP 100 5%	1/16W				R505	1-216-821-11	METAL CHIP	1K	5%	1/16W
R311	1-216-821-11	METAL CHIP 1K 5%	1/16W				R506	1-216-845-11	METAL CHIP	100K	5%	1/16W
R313	1-216-825-11	METAL CHIP 2.2K 5%	1/16W				R507	1-218-708-11	METAL CHIP	4.7K	0.5%	1/16W
R314	1-216-821-11	METAL CHIP 1K 5%	1/16W				R510	1-216-864-11	METAL CHIP	0	5%	1/16W
R318	1-216-833-11	RES, CHIP 10K 5%	1/16W				R511	1-216-845-11	METAL CHIP	100K	5%	1/16W
R319	1-216-845-11	METAL CHIP 100K 5%	1/16W				R512	1-216-847-11	METAL CHIP	150K	5%	1/16W
R320	1-216-855-11	METAL CHIP 680K 5%	1/16W				R516	1-216-809-11	METAL CHIP	100	5%	1/16W
R324	1-216-827-11	METAL CHIP 3.3K 5%	1/16W				R517	1-216-809-11	METAL CHIP	100	5%	1/16W
						R518	1-216-809-11	METAL CHIP	100	5%	1/16W	
						R519	1-216-809-11	METAL CHIP	100	5%	1/16W	
						R520	1-216-809-11	METAL CHIP	100	5%	1/16W	
						R521	1-216-809-11	METAL CHIP	100	5%	1/16W	
						R522	1-216-821-11	METAL CHIP	1K	5%	1/16W	
						R523	1-216-821-11	METAL CHIP	1K	5%	1/16W	

Ref. No.	Part No.	Description	Remark
R524	1-216-821-11	METAL CHIP 1K 5%	1/16W
R525	1-216-845-11	METAL CHIP 100K 5%	1/16W
R526	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R527	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R528	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R529	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R531	1-216-845-11	METAL CHIP 100K 5%	1/16W
R532	1-216-864-11	METAL CHIP 0 5%	1/16W
R533	1-216-845-11	METAL CHIP 100K 5%	1/16W
R534	1-216-845-11	METAL CHIP 100K 5%	1/16W
R535	1-216-845-11	METAL CHIP 100K 5%	1/16W
R536	1-216-864-11	METAL CHIP 0 5%	1/16W
R537	1-216-809-11	METAL CHIP 100 5%	1/16W
R538	1-216-845-11	METAL CHIP 100K 5%	1/16W
R539	1-216-845-11	METAL CHIP 100K 5%	1/16W
R540	1-216-845-11	METAL CHIP 100K 5%	1/16W
R542	1-216-845-11	METAL CHIP 100K 5%	1/16W
R547	1-216-864-11	METAL CHIP 0 5%	1/16W
< COMPOSITION CIRCUIT BLOCK >			
RB301	1-233-576-11	RES, CHIP NETWORK 100	
RB302	1-233-576-11	RES, CHIP NETWORK 100	
RB503	1-233-412-11	RES, CHIP NETWORK 1K (3216)	
< THERMISTOR >			
TH501	1-810-421-11	THERMISTOR NTH5G36B103K01TE	
< VIBRATOR >			
X501	1-760-365-11	VIBRATOR, CERAMIC (10MHz)	

MISCELLANEOUS			

9	1-674-594-11	FLEXIBLE BOARD	
20	1-776-527-71	CORD (WITH CONNECTOR) (ISO) (POWER)	
21	1-790-355-21	CORD (WITH CONNECTOR) (RCA)	
23	1-777-246-21	CORD (WITH CONNECTOR) (ANT)	
27	1-791-458-11	CABLE, POWER (WITH CHOKE COIL)	
28	1-475-982-11	UNIT (MICROPHONE)	
64	1-694-414-11	CONDUCTOR BOARD, CONNECTION (RUBBER CONNECTOR)	
153	1-654-693-11	SENSOR FLEXIBLE BOARD	
△ 165	8-583-046-05	OPTICAL PICK-UP KMS-241B/J1RP	
F1	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	
LCD900	1-803-633-11	DISPLAY PANEL, LIQUID CRYSTAL	
M901	A-3301-407-A	MOTOR ASSY, SP (SPINDLE)	
M902	A-3291-190-A	MOTOR ASSY, SL (SLED)	
M903	A-3291-191-A	MOTOR ASSY, LO (LOADING)	

HARDWARE LIST			

#1	7-621-772-20	SCREW +B 2X5	
#2	7-685-792-09	SCREW +PTT 2.6X6 (S)	
#4	7-685-794-09	SCREW +PTT 2.6X10 (S)	
#5	7-685-851-04	SCREW +BVTT 2X4 (S)	
#6	7-624-102-04	STOP RING 1.5, TYPE -E	

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
#7	7-627-852-37	PRECISION SCREW +P 1.7X1.8 TYPE3	
#8	7-621-772-08	SCREW +B 2X3	
#9	7-621-555-10	SCREW +K 2X3	
#11	7-685-105-19	SCREW +P 2X8 TYPE2 NON-SLIT	

ACCESSORIES & PACKING MATERIALS			

1-475-951-11	REMOTE COMMANDER (RM-X4V)		
3-023-882-01	LABEL (V M) (for RM-X4V)		
3-866-749-11	MANUAL, INSTRUCTION (ENGLISH, SPANISH, SWEDISH, PORTUGUESE) (AEP, UK)		
3-866-749-21	MANUAL, INSTRUCTION (FRENCH, GERMAN, DUTCH, ITALIAN) (AEP)		
3-866-749-31	MANUAL, INSTRUCTION (GERMAN, RUSSIAN) (German)		
3-866-751-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, SWEDISH, PORTUGUESE) (AEP, UK)		
3-866-751-21	MANUAL, INSTRUCTION, INSTALL (FRENCH, GERMAN, DUTCH, ITALIAN, RUSSIAN) (AEP, German)		
3-867-585-11	MANUAL, INSTRUCTION (VOICE RECOGNITION) (ENGLISH, SPANISH, SWEDISH, PORTUGUESE) (AEP, UK)		
3-867-585-21	MANUAL, INSTRUCTION (VOICE RECOGNITION) (FRENCH, GERMAN, DUTCH, ITALIAN, RUSSIAN) (AEP, German)		
X-3373-926-1	CASE ASSY (XR) (for FRONT PANEL)		

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Ref. No. Part No. Description Remark

PARTS FOR INSTALLATION AND CONNECTIONS

501	3-009-613-21	FRAME	
502	3-022-310-01	COLLAR	
503	3-027-138-01	SPRING, FITTING	
504	X-3366-405-1	SCREW ASSY (EXP), FITTING	
507	3-934-325-01	SCREW, +K (5X8) TAPPING	
508	1-465-459-21	ADAPTER, ANTENNA	
509	1-776-527-71	CORD (WITH CONNECTOR) (ISO) (POWER)	
510	1-791-458-11	CABLE, POWER (WITH CHOKE COIL)	
511	X-3369-817-1	BRACKET ASSY (for RM-X4V) (AEP, UK)	
512	X-3373-432-1	BRACKET ASSY (for RM-X4V) (AEP, German)	
513	7-685-248-14	SCREW +KTP 3X12 TYPE4	
* 514	3-671-893-11	CLAMP (LOW TYPE)	
515	1-475-982-11	UNIT (MICROPHONE)	
516	X-3375-861-2	HOLDER (MIC) ASSY	
517	3-389-594-11	CLAMP, CORD	

